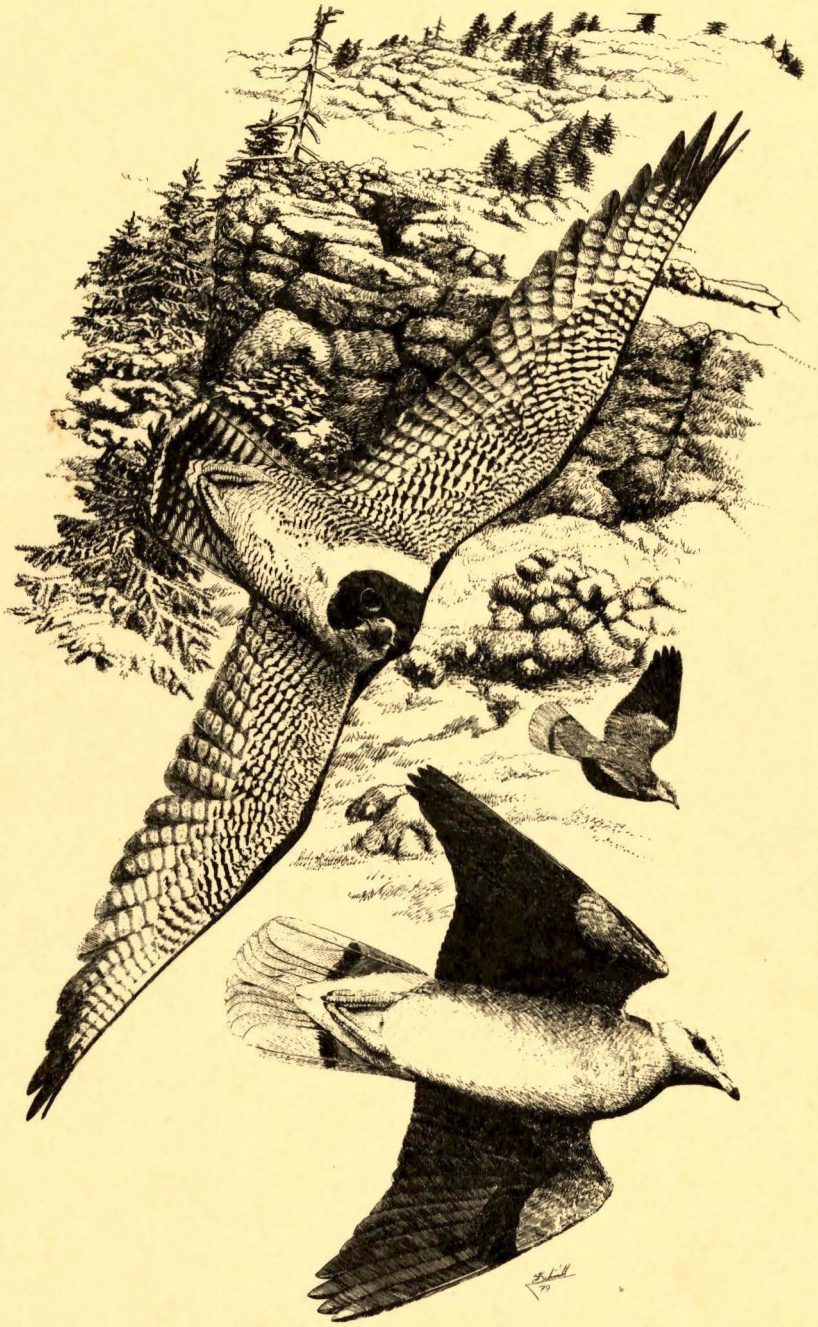
A PEREGRINE FALCON NESTING HABITAT SURVEY ON U.S. FOREST SERVICE LANDS IN NORTHWESTERN CALIFORNIA 1979



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A PEREGRINE FALCON NESTING HABITAT SURVEY

ON U. S. FOREST SERVICE LANDS IN NORTHWESTERN CALIFORNIA - 1979

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Submitted to:

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BY

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FORWARD

The reader is cautioned about misuse of the enclosed information. Peregrine Falcons are listed as an endangered species and as such, need careful management. Release of nest site locations to the general public, other than those responsible for managing the species and insuring its survival (as mandated by the 1973 Endangered Species Act as amended in 1978: Public Law 95-632), may result in the loss or harrassment of nesting falcons.

This final report is divided into two parts. The body contains the introduction, methods and materials, results, discussion and recommendations sections. The appendices contain site specific details for each forest, including cliff name and location. One report, submitted to Ron Escaño (Contracting Officer Representative), includes the body and all four appendices. The Mendocino, Six Rivers, Klamath and Shasta-Trinity National Forests will receive final reports containing the body and a single appendix that relates to their forest.

All site locations and names are identified by site numbers in the final report to maintain anonymity. Coding allows individual forests to obtain an overview of other forest results and control identification of site locations.

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We are deeply grateful to John Schmitt for granting us permission to use his exquisite peregrine pen and ink drawings for the report covers. Many thanks are also extended to Dr. D. A. Boyce for editing the final manuscript.

INTRODUCTION

Project Objectives

There were three major project objectives. The first was to determine cliff nesting habitat availability and suitability by surveying the following variables: cliff locations, cliff height, cliff aspect, feeding habitat quality, and disturbance potentials. The second objective was to determine Peregrine Falcon *Falco peregrinus anatum* nesting status at suitable habitat. The third objective was to determine survey technique reliability.

Peregrine Falcon Decline

The Peregrine Falcon (Figure 1) decline in North America occurred over a dramatically short period of time. Peregrines were noted nesting at several hundred sites, east of the Rocky Mountains, during the early 1940's (Hickey 1942). This vast 'eastern' population of peregrines was reduced to a single breeding pair in 1979 (which failed to produce young this year - Olendorff pers. comm.). In a thirty year period, 1947-1977, the eastern peregrine race is now all but extinct.

West of the Rocky Mountains, prior to 1946, there was no indication of a population failure (Bond 1946). Biologists convened in Madison, Wisconsin in 1965 to discuss Peregrine Falcon biology. One finding was evidence showing an initial decline beginning in 1947. In recent years, western peregrines have declined from their former levels by 75 per cent (Fyfe *et. al.* 1976). The decline began in the early 1950's in California

Figure 1. Female Peregrine Falcon (*Falco peregrinus anatum*) in California (Photograph courtesy of Howard Hunt)

intensifying until in 1969, fewer than 10 active nests were thought to exist. This loss is devastating considering that over 100 active nesting sites were known to exist in California prior to the end of World War II (Herman 1971). Western declines continue into 1979. A 50 per cent reduction in nesting peregrines was observed this year in Colorado. California, Arizona, New Mexico, Western Texas, and Mexico contain the last western stronghold (outside Alaska) for the anatum race of peregrines.

Ratcliff (1967) discovered that peregrine egg-shell thinning was associated with declining British Peregrines. In North America, pre World War II eggs were collected by oologists and contrasted with eggs collected after World War II. The eggs collected prior to World War II were shown to be significantly thicker than the latter sets (Hickey and Anderson 1968). Eggshell thinning coincided with the widespread application of pesticides such as DDT. It is now a well established tenant that the thin eggshell syndrome is a product of DDT (and its derivitives) poisoning, which inhibits its calcium deposition during eggshell formation. Peakall (1976) discussed in detail the causes of the peregrine decline attributed to chlorinated hydrocarbon pesticides. Sub-lethal chemical concentrations accumulate in our food web, intensifying in upper trophic levels. Avian predators receive concentrated dosages when contaminated prey are consumed. Falcons are documented to have died with prolapsed uteruses. Eggs are commonly broken. Unhatched chicks, at contaminated sites, fail to hatch due to excessive water loss during incubation (because of thinner eggshells and increased water evaporation). Some are so weakened that they physically cannot break open their egg.

Pesticide pollution continued to be present in California peregrines during 1978, again manifesting itself in thin eggshells (Harlow-pers. comm.).

The outlook for 1979 is much the same. DDT has been banned from agricultural use. Brown Pelicans *Pelicanus occidentalis*, like Peregrine Falcons, are severely affected by pesticides. Increased Brown Pelican nesting success (Anderson *et al.*, 1975) indicates a recent DDT reduction in our environment. However this is not construed to mean that similar events are occurring with peregrines.

Thirty peregrine pairs were found in California during 1979. This does not suggest a population recovery but rather the fruit of intensive searching. Many nesting failures occurred and many sites had non-breeding adults and sub-adults present. Productivity, defined as the number of young reaching the flying point, remained at 1.4 young per nest. Except for four active southern California nest sites, the remainder were found in northern California. The majority of those sites were in northwestern California; twelve of which were on Forest Service lands. Clearly the last great stronghold for California peregrines lies there!

Identifying Peregrine Nesting Habitat

Biologists have attempted to classify peregrine cliffs for many years. Hickey (1946:196) established three classes for eastern cliffs which determine peregrine distribution. A first class cliff he defined as "extremely high often rather long, usually overlooking water and generally dominating the surrounding country." A second class cliff differs only in reduced cliff dimensions. Third class cliffs are "small, not very high, although they may be far up a long slope, and they may or may not overlook water." Hickey believes that first class cliffs will withstand repeated molestation. Second class cliffs may tolerate some harrassment while third class cliffs are very vulnerable.

Bond (1946) concludes that Hickey's cliff rating system has only

general application in the West. Bond (1946:103) continues by saying, "There are literally hundreds of cliffs in the west that would be 'second class' or better in the east but they have no peregrines on them and, so far as is known, never have had. There are other areas, more subject to human disturbance, where 'second' and even 'third' class cliffs are regularly occupied. Some of the most magnificent cliffs in the West are in the Sierra Nevada and Cascade Ranges, usually near or above timberline (6,000-11,000 feet) and so far as I know, very few are reported to be occupied by breeding Peregrines." Bond is uncertain whether atmospheric condition, food supply or other factors cause few peregrines to nest above 1495 meters (5,000 feet).

Since Hickey and Bond's time western raptor biologists have continued classifying nesting sites, trying to precisely define and categorize them. Limited success has been made. However, peregrine biologists who analyze a cliff get an inner feeling of its peregrine nesting potential. The feeling is based on comparative observations made at hundreds of other active peregrine cliffs in the United States and worldwide.

The authors have attempted to increase this study's precision by identifying nesting variables found consistently at active sites and using those variables to rate cliffs most likely to have nesting falcons. A bias exists in that peregrine experience elsewhere certainly affected which variables were chosen.

STUDY AREA AND THE METHODS

The Study Area

The Klamath, Shasta-Trinity, Six Rivers, and Mendocino National Forests are located in northwestern California (Figure 2). Figure 3 shows the Forests' boundaries in northwestern California. There is a lack of historical Peregrine Falcon nesting information for this area. Eighty per cent of Richard Bond's historical nesting information pertains to areas south of San Francisco (Thelander pers. comm.). Curiously, northwestern California remains the only region in the state supporting a large number of nesting peregrines. This population's biological importance has begun to emerge within the last two years. For example, only one peregrine was seen in Oregon during the 1979 breeding season (Harlow pers. comm.). The authors hope reoccupation of historical Oregon and California nesting sites by northwestern California peregrines may be a reality. Hopefully, the northwestern California population can maintain its integrity.

Peregrines inhabit two of three broad habitat types found in northwestern California. Peregrines nest in oak-woodland-savannah and in coniferous forests with the exception of redwood forests. The four northwestern Forests are considered to be located in coniferous habitat, bordered in certain cases, by oak-woodland-savannah.

Methods

Many factors must be considered when evaluating Peregrine Falcon cliff nesting habitat. The authors used four filtering steps to select

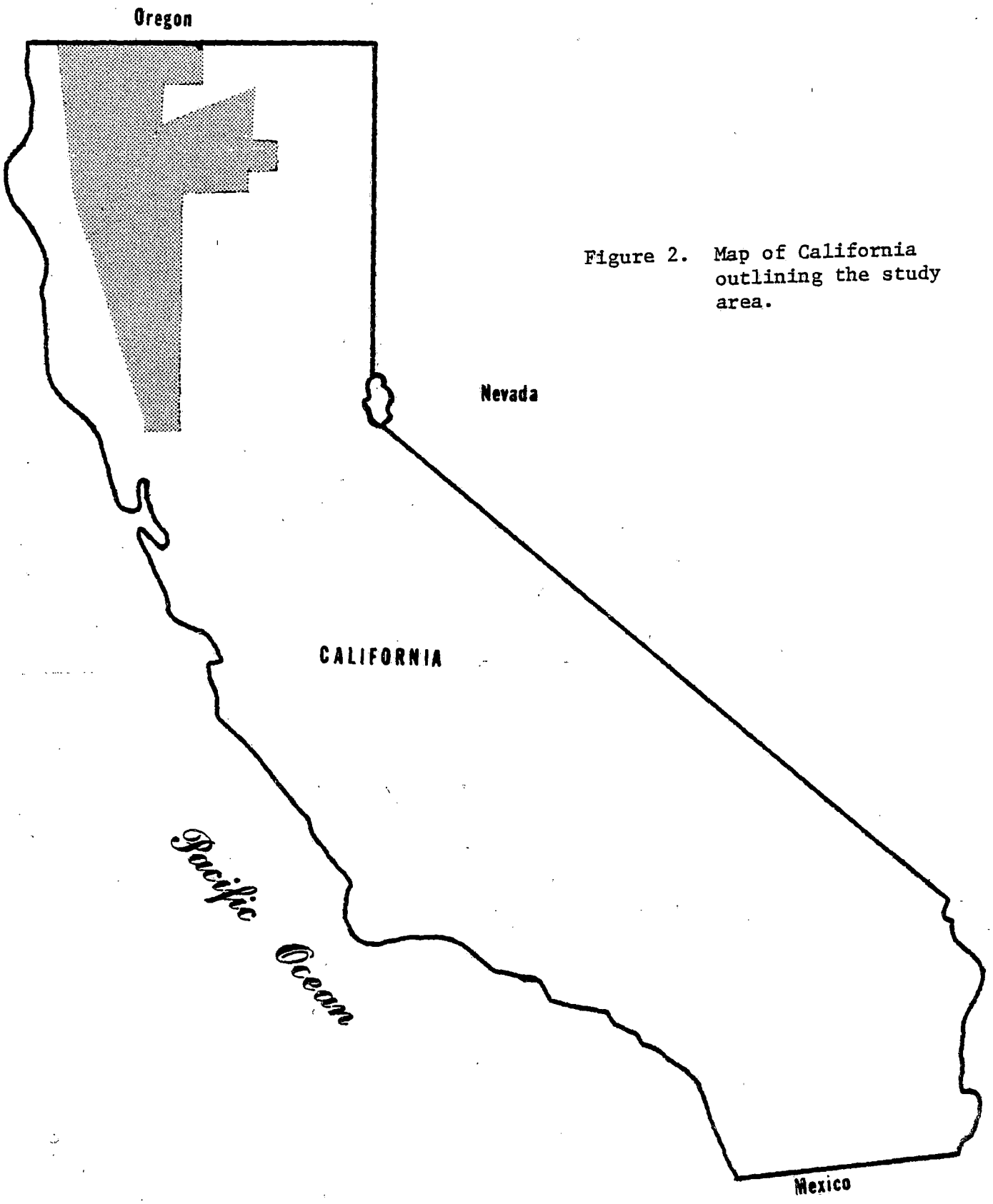


Figure 2. Map of California outlining the study area.

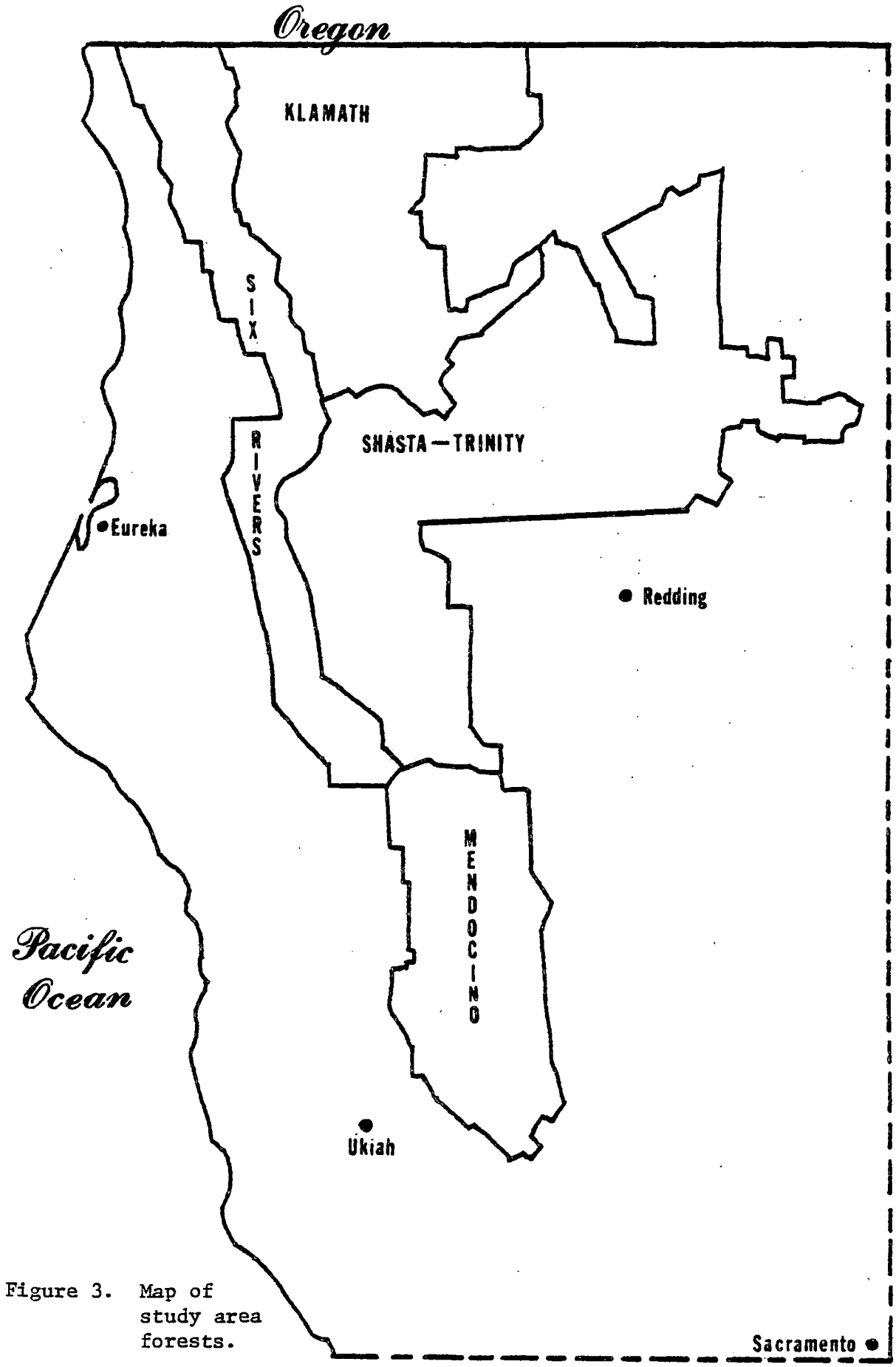


Figure 3. Map of study area forests.

and evaluate nesting sites. At the end of each step, fewer and fewer candidate cliffs remained from the original group. The filters were comprised of variables that are common among currently active peregrine nesting sites. The following variables were used during filter stages: cliff extent, cliff aspect, ledge availability, elevation, ledge quality, feeding habitat availability and quality, and finally the site's relationship to potential disturbances. The end filter goal was twofold: first, to identify the best potential nesting sites, and secondly, to identify from among the best cliffs the cliffs which held highest enhancement potential for attracting peregrines.

Any one variable may be a limiting factor. For example, cliffs under 44 meters (150 feet) are rarely used as nesting sites in California. Aspect or orientation of the cliff face is also a significant variable in cliff utilization by nesting California Peregrine Falcons (Harlow pers. comm.). All of the 23 nesting attempts in 1978 had a southern exposure.

The first filter step was to inspect aerial photographs to locate all potential nesting cliffs, within the Klamath and Shasta-Trinity National Forests and to rate them. Aerial photo analysis was completed for the Mendocino (Boyce 1978) and for the Six Rivers National Forest (R. & E. Hill 1978). Coupled with aerial photo interpretation, the contractors used light planes to verify their interpretations and to survey for additional nesting sites which may not have shown up on aerial photos. The second filter was individual cliff evaluation by helicopter. The third filter was an on-the-ground evaluation conducted by an experienced ground team. Finally the principal investigators evaluated the remaining cliffs by incorporating the results from the first three filter steps.

Sites were then ranked in order of enhancement potential and personal preferences were indicated. Cliff designations were defined by the U.S. Forest Service as follows:

Historical - Documented occupied site at some time in the past

Active - Occupied site (nesting at least initiated)

Occupied - Single defending adult present

Highly Suspected - Suitable habitat with signs of peregrine activity

Possible - Suitable habitat, but no signs of peregrine activity

Potential - Unsuitable habitat with enhancement potential

Unsuitable - Unsuitable habitat without enhancement potentials

Aerial Photographs

U.S. Forest Service aerial color photographs (scale 4 inches = 1 mile) were carefully examined to locate all potential nesting sites within the Klamath and Shasta-Trinity National Forests. All cliffs encountered were plotted on U. S. G. S. topographical maps (1:62650) and planimetric forest maps (scale ½ inch = 1 mile). Each cliff was given a rating based on cliff height and expanse. Cliffs rated as type 'A' were high and/or expansive in nature. Type 'B', 'C', and 'D' cliffs exhibited decreasing graduations from the above criterion. The first filter process identified 'A' and 'B' cliff locations for consideration in the final selective process. At this stage in the suitability selection process, 'C' and 'D' cliffs were not omitted from consideration, merely relegated to a lower priority status. Type 'A' and 'B' priority cliffs were described according to name, legal description, quadrangle, aerial photo number, and compiled into tables.

Next, each suitable cliff was analyzed by rating its filter variables on a scale of 1-4. Cliff variable scores were summed and a total value

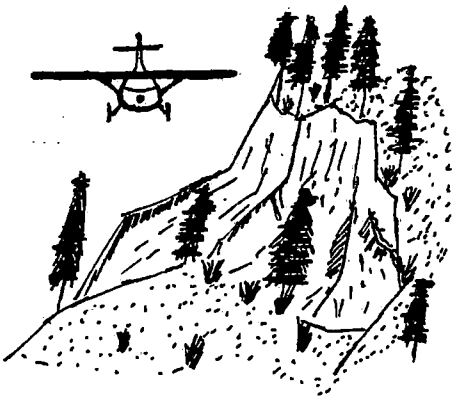
was derived for each cliff. Total values were compared and cliffs having values ranging from 7-10 were considered for helicopter inspection. Cliffs with values below this range were not considered. As previously mentioned, criterion variables used in the analysis were selected from observations made on similar peregrine cliff habitat used in the past and present. The authors interpreted and selected only nest site variables which appeared to exhibit high correlations with occupancy. Predictably, all known Peregrine Falcon nesting sites in the Klamath and Shasta-Trinity National Forests were found to be high priority cliffs (total code 7-10) in the selection process.

Since southfacing cliffs are used exclusively by peregrines in California, northfacing cliffs were eliminated during the first filter process. Proximity to a major river was considered and cliffs located on ridges overlooking rivers were generally, but not always, treated equally with cliffs down along the river itself. Table 1 shows the coding scheme used in the first filter analysis.

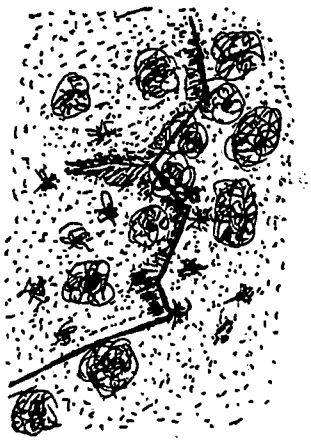
Table 1. Cliff selection coding scheme for peregrine nesting suitability used at the aerial photo interpretation stage

Elevation	Code	Aspect	Code
1200 m. (5,000 ft.) or below	3	N,NE,NW	-
		S,SE,SW	+
1200 m. - 1495 m. (4,000-5,000 ft.)	2		
above 1495 m. (5,000 ft.)	1		
River	**Code**	**Surface Water**	**Code**
cliff within: 0-2 km.	4	0-.5 km.	3
2-3 km.	3	.5-1 km.	2
3-4 km.	2	greater than 1 km.	1
4+ km.	1		

Next, light plane reconnaissance flights, using a Cessna 185 and a 337, were utilized to visually inspect the accuracy of the aerial photo interpretive process. In this way, the contractors could verify whether or not cliffs receiving high coded scores were indeed suitable. Cliffs rated 'C' or 'D' or receiving a low coded score were unsuitable, with a few exceptions (such as several excellent north facing cliffs which were low in elevation and low on a ridge). Also, cliffs which did not appear on aerial photographs were identified. These 'sleepers' result from vertical cliffs having trees growing to the cliff's brink and base. Figure 4 depicts an aerial and side view of such a cliff. The high aerial view masks a cliff's presence where flying at a low altitude clearly locates these cliffs. Several very valuable cliffs were located in this manner.



side view



aerial view

Figure 4. An aerial and side view of a 'sleeper' cliff which is occasionally encountered within the forests.

All cliffs selected for helicopter analysis were marked on U.S.G.S. topographical maps (1:62650) and Forest Service maps (½ inch = 1 mile) with brown or green circles and individually numbered. Final cliff selection for helicopter analysis involved input from principal investigators, their assistants, and U.S. Forest Service representative, Ron Escaño, during a post-fixed wing reconnaissance meeting. Existing records of peregrine activity, provided by Klamath and Shasta-Trinity Forests, were integrated into the selection process. Aerial photo overlays were prepared for selected cliffs indicating cliff location, photo number, forest name, site name, township, range, and section.

Helicopter

There are many advantages and some disadvantages in using rotor-winged aircraft in raptor surveys (White and Sherrod, 1973). However, advantages far outweigh disadvantages. The most important consideration involves the safety of the birds being studied. No survey is so important as to jeopardize an endangered species' existance. The authors' experience in Alaska (White and Boyce, 1977) reveals that falcons continue normal behavior such as incubating or perching when confronted with a helicopter in the immediate vicinity of their eyrie. Conversely, a human on foot near those same eyries elicited a strong aerial defense from the falcons. Such a disturbance may be critical if incubating adults are kept off nests for extended periods. A helicopter is quick to get next to and away from a nest site, thus the impact to nesting birds is relatively minor.

Certain geographical areas, may experience a higher falcon cliff occupancy rate early in the nesting season than at the end due to nesting failures. The authors have observed this phenomenon with peregrines on

the Coleville River in Alaska and with Prairie Falcons in the Mojave Desert in California. Thirteen pairs of peregrines initiated nesting and four pairs completed nesting in 1977 on the Coleville River. In the Mojave Desert, a 50 per cent seasonal decrease in nest occupancy has occurred over the last two years. The authors suggested a helicopter survey prior to egg-laying in the present study to document site occupancy early in the nesting season. By rechecking occupancy levels during the ground survey toward the season's end, the authors could determine if northwestern California forests were experiencing the same phenomenon as Coleville River and Mojave Desert falcons. Also, a helicopter survey conducted prior to egg-laying would minimize nesting disturbance to falcons during incubation.

The contractors elected to use a Bell Jet Ranger III contracted through Redding Air Service, located in Redding, California. The same aircraft was used for all helicopter flights. The authors were very fortunate to secure an extremely experienced pilot, Burt Train, who has acquired over 6,000 hours of flight time in helicopters.

The placement of observers within a helicopter is important in order to capitalize on experience. The most experienced observer, Clayton White, was placed in the forward seat located to the pilot's left. Visibility from the forward seat is very good in all directions. The person with the next level of experience, Douglas Boyce, was positioned directly behind Dr. White on the helicopter's left side. The final observer was placed behind the pilot on the helicopter's right side. Ground team members alternated as the final observer. Observations from rear seats were restricted to lateral views with limited visibility forward.

Each cliff was viewed with primary observers (White and Boyce)

facing the cliff. When terrain and/or wind conditions precluded the above method, the cliffs were approached on the pilot's side. Occasionally fly-bys were made in both directions.

In-flight orientation was aided by the observers combined knowledge of the study area as well as with general Forest maps and topographical maps (1:62650) marked with cliff locations. Each field member was assigned a Forest for familiarization purposes so that in-flight orientation would be precise.

Data collected in the past from helicopters has been restricted due to the fast flight pace and high work load. Writing extensive notes is virtually out of the question. In order to maximize our efficiency in collecting data and to increase the amount of data collected, the authors employed a systematic approach. Each site was assigned a number along a flight path based on aerial photo-interpretive, light plane reconnaissance work, and Forest Service recommendations. Additionally, each numbered site had previously been legally described and plotted onto topographical maps. Site numbers were used for reference when the authors recorded site information. This eliminated vague references to ridges, canyons or mountains while visiting sites in the air. Secondly, each observer was assigned tasks to be performed at each site, thus alleviating the work load while in the air (see Table 2 for task separation). Photographic, taped and written information were recorded at each site. White and Boyce followed a checklist procedure to evaluate the enhancement potential and general suitability of nesting sites for nesting peregrines (see Table 3 for format used by White and Boyce). Table 4 lists the criteria range for each variable used in the evaluation procedure seen in Table 3. Scores ranged from 1.0 - 3.0 for each category.

Table 2. Task separation of observers while in helicopter

White:	A. Evaluation of cliff nesting habitat using checklist and commentary
Boyce:	A. Take photographs of cliff B. Control tape recorder C. Orientation D. Evaluation of cliff nesting habitat
Assistant:	A. Keep track of time spent at each cliff - time of arrival and departure B. Handle topographical maps and direct flight path C. Observe right side of helicopter for falcons

Taped information was recorded, using a Sony Cassette-Recorder TC-110B, onto 90 minute Memorex MRX3 Oxide tapes. Three Realistic tie pin microphones (#33-920) were coupled into a Realistic transistorized stereo mike mixer (#33-920), allowing for continuous recording by all observers. A Nikkormat EL 35 mm camera, utilizing a Vivitar Series 70-210 zoom telephoto lens, was used for photographing nesting sites and closely documenting selected portions of the nesting site. A Linden battery clock and standard wrist-watches with second hands were used to note time of arrival and departure and duration of stay at each site. All time pieces were synchronized prior to each flight.

Tape recorded information for each site was later transcribed into writing. Written accounts were analyzed and observations weighed by Boyce and White to derive a mean evaluation for each nesting site (see results section: Table 15). High final site values determined ground survey work schedules.

When the principal investigators' scores differed, a mean score was achieved by adding both observers' ledge and cliff suitability scores

Table 3. Checklist used for in-flight orientation

	White			Boyce		
	1	2	3	1	2	3
Cliff Height						
Ledge Availability						
Ledge Quality						
Ledge Locations						
Enhancement Potential						
Human Disturbance						
Status						
Gut Feeling						

Higher # = Better Score

Table 4. Criteria range for each variable listed in Table 3.

Cliff Height:	Cliffs were placed into height categories at 50 ft., 100 ft., 150 ft., intervals. Estimates are based upon the altimeter in the helicopter
Ledge Availability:	Score 1 = 0 to 5 ledges seen on cliff Score 2 = 6 to 10 ledges seen on cliff Score 3 = 11 or more ledges seen on cliff
Ledge Quality:	Score 1 = 33% of ledges at least 10 sq. ft. Score 2 = 66% of ledges at least 10 sq. ft. Score 3 = 67%+ of ledges at least 10 sq. ft.
Ledge Locations:	Score 1 = Majority located at bottom of cliff Score 2 = Majority located at middle of cliff Score 3 = Majority located at top of cliff
Enhancement Potential:	Score 1 = Small cliff/non-vert./no overhangs Score 2 = Medium cliff/vertical/with cracks Score 3 = Effective height/vertical/aspect south-facing/overhangs on top of cliff with cracks
Human Disturbance:	Score 1 = More than one human disturbance. (roads, mining, logging, lookout,etc) Score 2 = 1 human disturbance only Score 3 = No human disturbances noted

Table 4. Criteria range for each variable listed in Table 3 (Cont'd)

Status:	Active = Presently occupied, nesting initiated Occupied = Single adult or sub-adult defending nest site Highly Suspected = Suitable habitat with Peregrine Falcon activity noted (whitewash, sightings) Possible = Suitable habitat, no Peregrine Falcon activity noted Potential = Unsuitable habitat with enhancement potential Unsuitable = Unsuitable habitat without enhancement potential
Gut Feeling:	A narrative of general cliff feeling and/or rating of: 1 = Very poor: small cliff usually non-vertical, small mass, few ledges 2 = Medium size cliff generally poor, but with some good faces and acceptable ledges 3 = Very good cliff with ledges available, good height, and usually whitewashed

together and dividing by two. Final values ranged from 2.0 (poor score) to 6.0 (high score). Cliffs with a total score of 4.0 or higher were selected for priority ground surveying. Cliffs with scores of 3.5 or higher were placed on a lower priority status. All selected cliffs located at elevations below 1495 meters (5,000 ft.) were viewed first due to earlier falcon fledging dates at the lower elevations in California.

Finally, the Forest Service selected ten active peregrine sites within the study area to test the contractor's procedure. However, Boyce was familiar with many active peregrine sites in the state, thus reducing the test's effectiveness. In order to compensate and remove bias, White was not informed of the test site locations. After the inspection was completed, White was informed of the test site locations.

Ground Survey

Bill Lehman coordinated all ground team efforts and data collection. Bill Lehman, Rick Meredith, John Schmitt and Ted Wenzel conducted all ground survey field work. Each person was equipped with binoculars, spotting scope, field notebook, and camera (when available). Private vehicles and hiking were needed to reach sites. Each site was observed, for an average of eight hours and signs of falcon activity, if present, were noted. The ground team addressed the following categories: prey, feeding habitat availability and quality, site's relation to water, disturbance potentials, enhancement potentials, factors for peregrine establishment, factors against peregrine establishment, management recommendations, directions to the site, and concluding comments. Sites below 1495 meters (5,000 ft.) in elevation were checked in April and May. Sites above 1495 meters in elevation were visited in June and July.

Final Evaluation

The final evaluation contains two parts. Part A is an evaluation of all sites observed on the ground and Part B is a cliff enhancement evaluation for inactive cliffs (having high final scores).

Part A

The authors evaluated each ground surveyed site using a numerical rating system based on five criteria: proximity to a major water source, current status (site fidelity), helicopter rating, ground rating, and human disturbance. Table 5 lists the criteria and their numerical values. Each ground surveyed site received a final numerical rating (see results section Table 15).

Thirty active California peregrine nesting sites were analyzed to

Table 5. Criteria and their rating used in the final evaluation process.

Site's Proximity to Water

points	criterion
10	0-4.0 km (0-2.5 miles) away
5	4.16-12.0 km (2.6-7.5 miles) away
1	12.16-19.2 km (7.6-12 miles) away

Site's Current Status

points	criterion
5	active or historical for peregrines
3	active with Prairie Falcons
1	inactive, not historical

Site's Helicopter Rating

points	criterion: hel. rating
10	6.0
5	5.0
1	4.0

Site's Ground Rating

points	criterion
10	Good
5	Moderate
1	Poor

Site's Disturbance Potential

points	criterion
5	disturbance absent
1	disturbance(s) present

determine their linear distance to a major water source. A mean distance (3.17 km., 1.98 miles) and standard deviation (3.5 km., 2.19 miles) were then derived for the 30 sites. These figures were used in developing the points for the site's proximity to water (in Table 5).

The authors believe that site fidelity plays a major role in nest site maintenance. Hickey (1942) cited cliffs with long term peregrine occupancy, including an eyrie that was occupied over one century. Other sites have lesser documented use as Hickey states, (Hickey *op. cit.*:183) "East of the Rockies, twenty eyries have a history exceeding ten years; fourteen exceed twenty; seven exceed thirty; and fourteen exceed fifty years." The site's current status category reflects site fidelity importance.

The helicopter criteria are taken from helicopter survey total scores. Ground survey criterion are based on subjective analysis of ground survey results (site specific). Disturbance is based on analysis of both helicopter and ground survey results.

Cliffs occupied by Prairie Falcons were given a lower score than those occupied by peregrines (in Table 5, site's current status). Both species nest within the four Forests. However, Prairie Falcons choose cliffs that are generally inferior in size and located in drier habitats, such as Forest border located along the entire Sacramento Valley's western edge. Proceeding west into wetter forest areas, prairies are replaced by peregrines. Therefore, Prairie Falcon cliffs were downgraded somewhat.

Part B

Young falcons, the authors believe, return to nests from which they were raised. When one or both adults are missing the returning young will take their place. However, when both adults are present, returning young

will radiate out from these nests in search of alternate nesting sites. Therefore, presently inactive ground surveyed sites (having high final scores and located near active peregrine sites) would be prime candidates for enhancement projects.

Inactive ground surveyed sites were analyzed for enhancement potential. A linear distance from each inactive site to the nearest active nesting peregrine site was calculated. Linear distance values were subtracted from the site's final score. Thus a relative enhancement potential ranking was derived for each site. In this way, sites having high final scores and located far from the nearest active peregrine site could be compared with sites having lower final scores but located closer to active peregrine cliffs. Finally, all scores were reviewed and those sites which the authors felt were prime candidates for enhancement projects were subjectively noted.

Figure 5 shows the filter process which begins with several hundred cliffs and ends with sites best suited for enhancement.

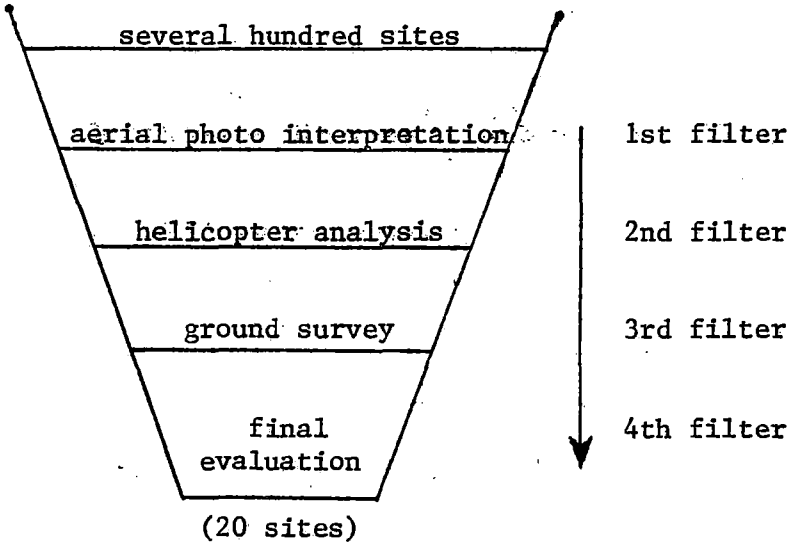


Figure 5. The filtering process used in cliff selection and site evaluation.

RESULTS

Aerial Photo Interpretation and Light Plane Reconnaissance

Four hundred and eighty man hours were spent analyzing aerial photographs. Fourteen hours were spent in light aircraft verifying aerial photo interpretation and checking the Klamath and Shasta-Trinity Forests for sleepers. Table 6 shows the total number of rated cliffs at each forest for every category and the number of cliffs selected for survey per category. A second priority list (not shown) of 14 cliffs was considered, only if time and funds permitted.

Helicopter

Approximately 28 hours were spent surveying northwestern California Forests from helicopter (see Table 7 for helicopter schedule). One hundred and sixty-one cliffs were slated for helicopter survey based upon aerial photo interpretation, light plane reconnaissance, and Forest Service recommendation. However, two sites were fogged in, four sites were snowed in, three sites were not visited, one site was visited but the tape recorder was accidently shut off, no information was recorded, and finally one site's visit was in question. Therefore, 150 cliffs out of 161 originally intended for survey were actually evaluated by helicopter.

Table 8 shows the helicopter evaluation process results per Forest and totals for all four Forests. Eighty-one cliffs were selected for ground evaluation with prioritization given to those cliffs located at elevations below 1500 meters (approximately 5,000 feet).

Table 6. Aerial photo results: breakdown of rated Klamath and Shasta-Trinity cliffs before and after selection

Forest Name	Cliff Rating	Total Number Cliffs	Number of Cliffs Selected	Per Cent of Total Cliffs
	A	38	10	2
Klamath	B	105	24	6
	C	188	8	2
	D	87	1	.002
Totals		418	43	10.002
	A	30	5	1
Shasta-	B	146	32	8
Trinity	C	171	3	1
	D	47	0	0
Totals		394	40	10

Table 9 shows comparisons between mean helicopter scores of ground surveyed (G.S.) cliffs and non-ground surveyed (N.G.S.) cliffs per classification. Also shown are mean helicopter times spent analyzing cliffs for each classification. A general correlation is noted; as the habitat's suitability increased, the length of helicopter time analyzing a site also increased, as well as a site's score. Sites established as marginal or unsuitable were not studied further. It is cost effective to focus upon sites having high merit rather than waste manpower on sites which definitely do not warrant further study.

Enhancement costs are considered prohibitive at sites classified as Unsuitable/Potential. For example, let us examine a 7.4 m (25 ft.) cliff. Heavy excavating equipment could be brought in to remove material from below the cliff. After the 7.4 m cliff had been transformed into a minimum 44 m (150 ft.) cliff, costs would certainly be no less than $50,000.

Table 7. Helicopter flight schedule for peregrine nesting habitat survey in the Mendocino, Six Rivers, Klamath, and Shasta-Trinity National Forests

Date	Time	Place	Trip Length
4/7/79	06:50	take-off, Redding	
	09:30	landing, Paskenta	2.6 hours
	10:00	take-off	
	12:00	landing, Mad River Rock	2.0 hours
	13:50	take-off	
	15:50	landing, Eureka	2.0 hours
4/8/79	08:30	take-off, Eureka	
	09:04	landing, Mad River Rock	0.6 hours
	10:08	take-off	
	11:51	landing, Willow Creek	1.8 hours
	12:55	take-off	
	15:41	landing, Willow Creek	2.75 hours
4/13/79	14:16	take-off, Redding	
	17:00	landing, Redding	2.75 hours
4/14/79	07:27	take-off, Redding	
	10:00	landing, Redding	2.5 hours
	11:00	take-off	
	13:15	landing, Weaverville	2.55 hours
	14:55	take-off	
	16:34	landing, Scott Valley	1.6 hours
	17:39	take-off	
	18:51	landing, Scott Valley	1.2 hours
4/15/79	09:00	take-off, Scott Valley	
	11:36	landing, Seiad Valley	2.55 hours
	12:50	take-off	
	15:15	landing, Calahan	2.45 hours
	15:40	take-off	
	16:27	landing, Redding	0.7 hours
5 days		14 flights	28.05 hours

Table 8. Breakdown of helicopter survey cliff ratings per Forest and breakdown of cliffs selected for ground survey per Forest

		Site Suitability Score									No Hel.	
		2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	Eval.	Total
Mendocino	# of Sites	2	0	3	5	7	2	2	3	2	2	28
	# of Sites to Ground Check	0	0	0	0	7	2	2	3	2	1	17
	# of Ground Checks over 1495 m (5000')	0	0	0	0	2	0	0	1	1	0	4
Six Rivers	# of Sites	5	3	1	5	3	3	6	3	5	6	40
	# of Sites to Ground Check	0	0	0	5	3	3	3	1	4	6	26
	# of Ground Checks over 1495 m (5000')	0	0	0	3	0	0	2	0	0	3	8
Klamath	# of Sites	21	2	3	1	3	2	3	0	5	8	48
	# of Sites to Ground Check	0	0	0	0	3	2	3	0	5	7	20
	# of Ground Checks over 1495 m (5000')	0	0	0	0	0	1	0	0	2	3	6
Shasta T	# of Sites	9	1	12	3	6	1	3	2	6	3	46
	# of Sites to Ground Check	1	0	0	0	6	1	2	1	4	1	16
	# of Ground Checks over 1495 m (5000')	0	0	0	0	1	0	0	0	0	0	1
TOTALS	# of Sites	37	6	19	14	19	8	14	8	18	18	161
	# of Sites to Ground Check	1	0	0	5	19	8	10	5	15	15	78
	# of Ground Checks over 1495 m (5000')	0	0	0	3	3	1	2	1	3	6	19

Ten other cliffs could be made highly attractive to peregrines for the same price or less. Therefore, only sites which showed promise as peregrine nesting habitat were fully described.

Table 9. Comparisons between mean helicopter scores of ground surveyed (GS) cliffs and non-ground surveyed (NGS) cliffs per classification (see text for further description)

Classification	Number of NGS Cliffs	Mean Score	Number of GS Cliffs	Mean Score	Mean Am't of Helic. time at NGS & GS cliffs
Uns	38	2.15	1	4.0	1.67 min.
Uns/Pot	11	2.92	2	2.88	2.98 min.
Pot	12	3.32	6	3.58	2.95 min.
Pot/Pos	3	3.42	6	4.54	2.79 min.
Pos	5	3.25	28	4.47	3.43 min.
Pos/H-S	0	0	5	5.55	3.54 min.
H-S	0	0	6	5.33	4.08 min.
H-S/Act	0	0	2	4.88	5.0 min.
His	2	5.75	10	5.43	4.79 min.
Off Forest	4	5.5	0	0	

Classification Key

His = Historical
Act = Active
H-S = Highly Suspected
Pos = Possible
Pot = Potential
Uns = Unsuitable

Individual cliff evaluations for all forests may be found in Tables 10-14. Table 10 contains the Mendocino Forest helicopter results, Table

11 the Six Rivers findings, Table 12 the Klamateh results, and Tables 13 and 14 the Shasta-Trinty. The tables indicate locations where raptors were seen during the helicopter survey, site scores and classifications.

Peregrine Falcon response to the helicopter varied from their observed behavior in Alaska. California attendant males tended to launch from cliff faces on set wings in a descending glide when flushed by the helicopter. On one particular occasion a falcon was not observed until the helicopter had already passed the cliff. Falcons were observed to occasionally soar in front of the cliffs. Falcons at known eyries tended to remain in the eyrie vicinity when flushed. Certain falcons, thought to be non-nesters, quickly left the area upon approach by helicopter.

Prairie Falcons reacted very differently than peregrines by actively flying in evasive patterns away from cliffs or about cliff faces. Female Prairie Falcons left their nests whereas female Peregrine Falcons tended to remain out of view, presumeably on the cliff. On one occasion a male peregrine flushed while the female continued incubating her eggs as the helicopter passed at eye level with her. The authors felt that they saw mainly male peregrines at cliffs. If a male was out hunting, he could have been missed altogether by the helicopter survey.

The second flight series was held a week after the first. Since falcons were not leaving known cliffs upon close inspection, the authors presume that their flight coincided with the initial incubating phase. There are both positive and negative aspects related to the latter point. First, since incubating or brooding females appear not to leave their eggs during early incubation (similar to Alaskan peregrines) helicopter disturbance is greatly reduced. Negatively, confirming cliff status as "active" is severely hampered by this type of Peregrine Falcon behavior.

TABLE 10: HELICOPTER RESULTS FOR SELECTED CLIFFS IN THE MENDOCINO N. F.

Cliff #	Elevation	Raptors Seen	Ledge Score	Cliff Score	Total Score	Helicopter Classification*
1	3700	No	2.0	2.5	4.5	Pos
1A	3000	No	2.5	2.0	4.5	Pos
2	4700	No	1.0	1.0	2.0	Uns
2A	3600	No	2.0	1.5	3.5	Uns
3	5300	Prairie	3.0	2.5	5.5	His/Pos
4	3000	No	1.5	2.75	4.25	Pos/Pot
5	4000	No	1.0	2.0	3.0	None
6	5500	Kestral	1.5	1.75	3.25	Pot
7	5200	No	1.75	2.5	4.25	H-S/Pos
8	3000+	No	2.0	3.0	5.0	Pos/Pot
9	2700	Goshawk	1.75	1.75	3.5	Pot/Uns
10	3200-5000	Sh-shin	1.5	2.5	4.0	Pos/Pot
11	2500	No	1.0	2.5	3.5	Pot
12	2500	No	1.0	2.5	3.5	Pot
13	3300	G.E.	1.5	2.0	3.5	Pos
14	2300	No	1.0	1.0	2.0	Uns
15	1500	No	2.75	3.0	5.75	Pos
16	1600	No	3.0	3.0	6.0	Pos
17	2450	No	2.5	2.5	5.0	His/Pos
18	2300	No	2.0	2.0	4.0	Pos
19	3000	Kestral	1.0	3.0	4.0	Pot
20	3000	No	1.0	2.0	3.0	Uns
21	3300	No	1.5	2.5	4.0	Pot
22	5700	No	2.0	2.0	4.0	Pos
23	3900	No	2.5	3.0	5.5	Pos/H-S
24	5400	No	visited-no analysis			None

*HELICOPTER CLASSIFICATION KEY

His = Historical
Act = Active
Occ = Occupied
H-S = Highly Suspected
Pos = Possible
Pot = Potential
Uns = Unsuitable

TABLE 11: HELICOPTER RESULTS FOR SELECTED CLIFFS IN THE SIX RIVERS N. F.

Cliff #	Elevation	Raptors Seen	Ledge Score	Cliff Score	Total Score	Helicopter Classification*
27	3000	No	1.75	2.0	3.75	Pos
28	3000	No	2.0	2.0	4.0	Pos
29	3000	No	3.0	3.0	6.0	Pos/H-S
30	3000	No	3.0	3.0	6.0	H-S
31	5058	No	1.75-2	2.0	3.75-4	Pot/Uns
32	4600	No	1.0	1.0	2.0	Uns
33	3000	G.E.	2.25	2.5	4.75	Pos
34	3480	No	1.5	1.5	3.0	Uns/Pot
35	4000	Prairie	3.0	3.0	6.0	H-S/Pos
36	5500-5900	No	1.0	2.5	3.5	Pot
37	4600	Per Fal	2.5	3.0	5.5	His/Act
37A	3000	Per Fal	3.0	3.0	6.0	His/Act
37 B	2800	Per Fal	2.0	3.0	5.0	His/Act
38	2100	G.E.	2.0	3.0	5.0	Pot
39	4250	No	2.0	3.0	5.0	Pot
40	5000	No	1.0	1.0	2.0	Uns
40A	4500	Per Fal	No Analysis			H-S
41	5000			FOG		
42	3950			FOG		
43	1400	No	1.5	2.0	3.5	Pot
44	2000-4600	No	1.0	1.0	2.0	Uns
45	3200	No	1.0	3.0	4.0	Pot
46	4700	No	1.0	1.5	2.5	Pot
47	3400	Per Fal	3.0	3.0	6.0	H-S
48	6000	No	1.0	1.75	2.75	Uns
49A	5100	No	1.5	2.25	3.75	Pos
49B	5100	No	2.0	3.0	5.0	Pos
49C	5100	No	2.0	3.0	5.0	Pos
50	5100-5600	No	1.0	1.0	2.0	Uns
51	6900	No	1.0	1.0	2.0	Uns/Pot
52	3000	Per Fal	2.5	2.5	5.0	His/Act
53A	3200	Per Fal	2.5	2.25	4.75	Act
54	4900	No	visited-no analysis			
55	4900	No	2.75	3.0	5.75	Pos
56	1000	No	1.0	1.5	2.5	Pot
57	2000	No	2.0	2.0	4.0	His/Pos
58	5200-6400	No	Snow	Snow	Snow	
59	5900	No	Snow	Snow	Snow	
60	5800	No	½ in clouds-couldn't see			
211	4900	No	1.0	2.0	3.0	Uns/Pot

HELICOPTER CLASSIFICATION KEY

His = Historical
Act = Active
Occ = Occupied
H-S = Highly Suspected
Pos = Possible
Pot = Potential
Uns = Unsuitable

TABLE 12: HELICOPTER RESULTS FOR SELECTED CLIFFS IN THE KLAMATH N. F.

Cliff #	Elevation	Raptors Seen	Ledge Score	Cliff Score	Total Score	Helicopter Classification
53B	1200	Per Fal	2.0	2.25	4.25	His/Act
53C	5098	No	3.0	3.0	6.0	His/H-S
61	5200	No	1.0	1.0	2.0	Uns
62	4959	No	2.0	1.5	3.5	Pot/Pos
63	5781	No	2.0	2.0	4.0	Pot/Pos
64	5200	No	1.0	1.5	2.5	Uns/Pot
65	1200	No	2.5	2.0	4.5	Pos
66	6400	No	Snowed in			Pos
67	5600-6800	No	2.5	2.0	4.5	Pos
67A	1600-2400	No	3.0	2.0	5.5	Pos/H-S
67B	3200	No	1.0	1.0	2.0	Uns
67C	3600	No	1.0	1.0	2.0	Pot
68	5400	G.E.	1.0	1.0	2.0	Uns
68A	6800	No	1.0	2.0	3.0	Pot/Uns
69	4800	No	3.0	3.0	6.0	Pos/Pot
69A	6700	No	Snowed in			
70	3500	No	1.0	1.0	2.0	Uns
71	4200	No	1.0	1.0	2.0	Uns
71A	4547	No	1.0	1.0	2.0	Uns
71B	3400	No	1.0	1.0	2.0	Uns/Pot
71C	3200	No	1.0	1.0	2.0	Uns/Pot
72	3600	No	1.5	1.5	3.0	Pot
72A	3800	No	2.0	3.0	5.0	Pos
73	4000	No	1.0	1.0	2.0	Uns
74	4000	No	visited-no analysis			
74A	2400	No	visited-no analysis			
75	5400	No	was not recorded			
76	4400	No	3.0	3.0	6.0	H-S
77	7000	No	1.0	1.0	2.0	Uns
207	5400-6400	Prairie	3.0	2.5	5.5	Pos

TABLE 12: HELICOPTER RESULTS FOR SELECTED CLIFFS IN THE KLAMATH N. F. (Cont'd)

Cliff #	Elevation	Raptors Seen	Ledge Score	Cliff Score	Total Score	Helicopter Classification*
78	4900	No	1.0	1.0	2.0	Uns
78B	4500	No	1.0	1.0	2.0	Uns
79	4500	No	1.0	1.0	2.0	Uns
80	4500	No	1.0	1.0	2.0	Uns
81	2400	No	1.0	1.0	2.0	Uns
82	6400	No	1.0	1.0	2.0	Uns
83	3000		visit in question			
83B	1800	No	1.0	1.0	2.0	Uns
83C	1400	No	1.0	1.0	2.0	Uns
83D	1360	No	1.0	1.0	2.0	Uns
84	1800	Per Fal	3.0	2-2.5	5.0	Act
85	1880		did not visit			
86	2600	R-T	3.0	3.0	6.0	His/H-S
87	3000	No	1.0	1.0	2.0	Uns
88	6800	No		1.5		Uns
88B	7100	No	1.0	1.5	2.5	Uns/Pot
89	7000	No	1.5	1.5	3.0	Pot
90	5000	Prairie	2.25	2.0	4.25	Pos
91	5100	Prairie	3.0	3.0	6.0	Pos
210	5900	Prairie	no analysis			Pos

*HELICOPTER CLASSIFICATION KEY

His = Historical
Act = Active
Occ = Occupied
H-S = Highly Suspected
Pos = Possible
Pot = Potential
Uns = Unsuitable

TABLE 13: HELICOPTER RESULTS FOR SELECTED CLIFFS IN THE SHASTA N. F.

Cliff #	Elevation	Raptors Seen	Ledge Score	Cliff Score	Total Score	Helicopter Classification*
104	5500	No	1.0	3.0	4.0	Pot/Pos
105	7000	No	1.0	2.0	3.0	Uns
106	3800	No	1.0	1.0	2.0	Uns
107	9000	No	1.0	1.0	2.0	Uns/Pot
108	7600	No	1.5	1.5	3.0	Uns
109	7400	No	1.0	1.0	2.0	Uns
110	4400-6000	No	3.0	3.0	6.0	His/Act
111	4600	No	2.0	1.5	3.5	Pot/Pos
112	4000	R-T	1.5	1.5	3.0	Pos
113	3600	No	1.5	1.5	3.0	Uns/Pot
114	1500-2000	No	3.0	2.5	5.5	H-S
115	1200-3000	No	3.0	3.0	6.0	His/H-S
116	3000	No	2.0	1.75	3.75	Pos/Pot
117	3200	G.E.	3.0	2.0	5.0	Pos
118	2250	No	1.0	2.0	3.0	Uns
119	4500	No	1.0	2.0	3.0	Pos
120	3500	G.E.	1.5	1.5	3.0	Uns/Pot
121	5000	No	1.0	1.0	2.0	Uns
122	3600	No	1.5	2.0	3.5	Pos
123	2400-2800	No	3.0	2.0	5.0	His/H-S
124	2800-4800	No	3.0	3.0	6.0	Pos
125	1600-2800	No	1.5	1.5	3.0	Pot
200	2500	No	not worth analysis			Uns
201	2500	No	3.0	1.0	4.0	Pos
203	6600	No	1.5	1.5	3.0	Uns/Pos
204	5400-7000	No	not worth analysis			
205	5800-7000	Prairie	3.0	3.0	6.0	Pos
206	4800	No	1.0	1.0	2.0	Uns

*HELICOPTER CLASSIFICATION KEY

His = Historical
Act = Active
Occ = Occupied
H-S = Highly Suspected
Pos = Possible
Pot = Potential
Uns = Unsuitable

TABLE 14: HELICOPTER RESULTS FOR SELECTED CLIFFS IN THE TRINITY N. F.

Cliff #	Elevation	Raptors Seen	Ledge Score	Cliff Score	Total Score	Helicopter Classification*
25	3600		did not visit			
26	6700	No	3.0	3.0	6.0	H-S/Pos
92	3500	No	1.0	1.0	2.0	Uns
93	2500	No	1.0	1.0	2.0	Uns
93A	4000	No	2.0	2.0	4.0	Pos
94	2700	No	2.0	2.0	4.0	Pos
95	2800	No	2.0	2.5	4.5	H-S
96	3100	No	2.0	2.0	4.0	Pos
97	1300-2000	No	2.75	2.5	5.25	Pos
98A	2000-3000	Per Fal	3.0	3.0	6.0	His/Act
98B	2000-3000	No	1.25	1.5	2.75	Pot
98C	2000-3000	No	1.5	1.5	3.0	Uns
100	3500	No	1.0	1.0	2.0	Uns
101	3400	No	1.0	1.0	2.0	Uns
102	4500-6000	No	1.5	1.5	3.0	Pot/Pos
103	2500-3500		did not visit			
208		No	2.0	2.0	4.0	Pos
209		No	1.0	2.0	3.0	Pot

*HELICOPTER CLASSIFICATION KEY

His = Historical
Act = Active
Occ = Occupied
H-S = Highly Suspected
Pos = Possible
Pot = Potential
Uns = Unsuitable

The authors feel that an incubating female should not be flushed unnecessarily. Fortunately, helicopter cliff evaluations appear not to affect normal peregrine incubating behavior.

One new Peregrine Falcon eyrie was discovered in the Klamath National Forest during the helicopter survey. Another possible site was located on the Six Rivers Forest. A sub-adult male observed there may be attempting to establish a breeding territory.

Interestingly, very little cliff habitat is available for nesting peregrines along the Smith River in Six Rivers Forest, and along the forks of the Klamath River. Since these areas are cliff limiting, ledge enhancement projects similar to the successful Mendocino National Forest project may be in order. Wildlife managers are provided with a pathway to enhance nesting habitat of threatened and endangered raptors.

Ground Results

The ground results are site specific. Individual site evaluations do not easily lend themselves to placement in tables. Therefore, they are located in attached Forest Appendices. (The Mendocino site specific results are located in Appendix A - pages M-1 to M-41, the Six Rivers in Appendix B - pages S-1 to S-68, the Klamath in Appendix C - pages K-1 to K-64 and the Shasta-Trinity in Appendix D - pages ST-1 to ST-64.) A total of 704 hours were spent at 77 sites--four additional sites were surveyed late, bringing the total to 81 sites. A mean time observing per site equaled 9.14 hours (n=77). "A" sites (n=7) and "B" sites (n=16) were viewed for mean times of 8.54 hours and 8.83 hours respectively. "C" sites (n=5) were viewed, on the average, for 12.4 hours. These times do not include transportation to or from sites. Table 9 shows the number of ground surveyed cliffs per classification category along with

that categories associated mean ($\bar{x}$) helicopter rating.

Ground results were evaluated by the principal investigators in filter step four and a final score per site was derived. These results are found in the final analysis section.

Prey Results

Abundant and vulnerable avian prey are needed to maintain active nests; however, these necessary data levels have yet to be defined. Bond (1946: 108) states, "as in the East, an especially good food supply may be an attraction, but Peregrines nest in places that seem to be about as low in prey as are most areas without any falcons." Therefore, prey composition and abundance may be deceiving when evaluating peregrine habitat suitabilities.

Prey is a critical topic but it loses importance without falcon home range knowledge on a site by site basis. It is known that peregrines will travel in excess of nine miles (from the nest) to obtain prey (Porter and White 1973). Therefore an 8 - 10 kilometer (5-6.25 mile) radius (arbitrarily defined) around each site should be surveyed to determine the true nature of prey availability and vulnerability.

Based on the site specific data, the following was concluded:

A. In the immediate cliff vicinity most commonly observed birds were Band-tailed Pigeon (*Columba fasciata*), Common Flicker (*Colaptes auratus*), Stellars Jay (*Cyanocitta stelleri*), American Robin (*Turdus migratorius*), Western Tanager (*Piranga ludoviciana*), Black-headed Grossbeak (*Pheuticus melanocephalus*), and Dark-eyed Junco (*Junco hyemalis*).

B. Some birds were seen more frequently at sites than other birds. Our prey results are a function of a particular observer's

experience. Without actual prey data we have no idea if the aforementioned birds are regularly used as prey. However, limited prey remains collected from two active sites suggest Band-tailed Pigeon, American Robin, Common Flicker, and Stellars Jay as important species. Other prey remains found at nests were seen infrequently by the ground survey team or not at all. They include: Coot (*Fulica americana*), Wood Duck (*Aix sponsa*), Mourning Dove (*Zenaidura macroura*), Domestic Pigeon (*Columba livia*), and Lewis' Woodpecker (*Asyndesmus lewis*).

C. Finally, prey data lose management application until it is determined whether intact forests, patches of forest (the edge effect) or clear-cut areas increase vulnerability, densities, and distribution of preferred prey.

Wenzel (1975), Hunt (1976), and Kirven (1977 and 1978) report major prey items for peregrines in Sonoma and Napa counties as being the following: Rock Dove, Common Flicker, White-throated Swift (*Aeronautes saxatalis*), Acorn Woodpecker (*Melanerpes formicivorous*), American Robin, Black-headed Grossbeak, and Rufus-sided Towhee (*Pipilo erythropthalmus*). The absence of abundant Dark-eyed Juncos and Western Tanagers, seen during the present study, may suggest reduced vulnerability, lower energetic return per falcon pursuit effort, or scarcity of these species in the prey remains collected from Sonoma and Napa Counties. Wenzel reports (1975) that the following major prey species account for 88.4 per cent of the prey biomass: Rock Dove, Common Flicker, Band-tailed Pigeon, American Robin, Mourning Dove (Zenaidura macroura), Acorn Woodpecker, and Black-headed Grossbeak. Rock Doves account for 58.5 per cent of the prey biomass. The authors suspect Band-tailed Pigeons are the most important prey species within the four forests surveyed.

Ninety-six potential avian prey species were observed within the four northwestern forests. A species account per site may be found in the individual ground site reports (see appendix).

Final Results (Part A)

Table 15 shows the final numerical rating per classification category for all ground-truthed sites. Sites with scores between 0-20 were generally considered 'potential' sites. 'Possible' sites had scores between 31-46. Each site that was evaluated by both helicopter and on the ground was categorized into the above categories (also included are historical, active and unsuitable categories) and plotted onto general forest maps and U.S.G.S. topographical maps. The relationship between the category and the final score was arbitrary. For example a score of 21 made a site 'possible' whereas a score of 20 made a site only 'potential'. In reality a gradient exists and any cutoff point will have exceptions on either side. Approximately 70 per cent of the cliffs with final scores above 30 had falcons (Peregrines or Prairies) present.

Final Results (Part B)

Table 16 gives the final results for cliff enhancement in the Mendocino, Six Rivers, Klamath, and Shasta-Trinity National Forests. Columns A-E indicate site number, helicopter rating, helicopter classification, final rating, and final classification for selected sites. Column F shows the distance from each site to the nearest active peregrine nesting site. Column G indicates enhancement scores based on a sites final rating (Column D) minus its distance to the nearest active peregrine nesting site (Column F). Column H indicates each site's relative enhancement ranking within the study area. Column I indicates the relative enhancement ranking within each forest. Astericks next to each site's ranking in Column

Table 15. Final cliff rating and classifications for all ground surveyed sites

MENDOCINO			SIX RIVERS			KLAMATH			SHASTA-TRINITY		
Site #	Rating	Classif.	Site #	Rating	Classif.	Site #	Rating	Classif.	Site #	Rating	Classif.
1	29	Pos	27	27	H-S/Occ	53B	31	His/Act	25	18	Pot
1A	27	Pos	28	28	H-S	53C	41	H-S	26	36	H-S
3	36	His/Pos	29	36	H-S/Pos	63	14	Pot	93	18	Pot
4	27	Pos	30	36	H-S	65	24	Pos	93A	32	Pos
7	25	Pos	31	19	Uns	66	21	Pos	94	32	Pos
8	27	Pos	33	19	Uns	67	23	Pos	95	23	Pos
10	14	Pot	35	30	Pos	67A	21	Pos	96	15	Pot
15	36	Pos	36	17	His/Pot	69	31	Pos	97	27	Pos
16	28	Pos	40A	31	Pot/H-S	69A	17	Pot	98	41	Pot
17	36	His/Pos	41	9	Pot	72A	27	Pos	103	22	Pos
18	19	Pos	42	13	Pot	74	22	Pos	104	23	Pos
19	32	Pos	43	22	Pos	75		Pos	110	46	His/Act
21	19	Pos/Pot	45	28	Pos/Pot	76	46	Act	114	23	Pos
22	18	Pot	47	46	H-S	83	refused access		115	36	His/Act
23	31	H-S	49A	18	H-S	84	36	Act	117	40	H-S
			49B	20	H-S	85	18	Pot	124	37	Pos
			49C	20	H-S	86	46	His/Act	201	10	Pos
			51	18	Uns	90	39	Pos	208	23	Pos
			52	36	His/Act	91	34	Pos			
			53A	41	Act	207	34	Pos/H-S			
			54	13	Pot						
			55	18	Pos						
			56	26	Pos						
			57	32	Occ						
			58	17	Pos						
			59	13	Pot						
			60	13	Uns						
			211	14	Pot						

Classification key same as for helicopter classification (see Tables 10 - 14)

Table 15. Final cliff rating and classifications for all ground surveyed sites (Con't)

SUMMARY: NUMBER OF SITES PER SCORE RECEIVED

Classification					
Unsuitable & Potential		Possible		Highly Suspected, Active & Hist.	
Score	Number of Sites	Score	Number of Sites	Score	Number of Sites
9	1	21	2	31	4
10	1	22	3	32	3
13	4	23	5	34	1
14	3	24	1	36	9
15	1	25	1	37	1
17	3	26	2	39	1
18	6	27	6	40	1
19	6	28	2	41	3
20	2	29	1	46	4
		30	1		
TOTALS:	25		24		26

I indicate the authors' subjective choices for enhancement projects. These preferences were based upon the 'inner feeling' derived from experience with other peregrine cliffs.

Bond is unclear why few peregrines are found nesting above 1495 meters (5,000 ft.) elevation. Some of the states most spectacular nesting cliffs occur there. Table 17 shows the elevations where peregrines nested or where noted during this study. Included in Table 17 are elevations of survey cliffs per forest for comparison. Seventy-five per cent of all peregrine sightings were at cliffs located between 598 meters and 1495 meters (2,000-5,000 ft.) in elevation. Eleven per cent were noted below 598 meters (2,000 ft.). No peregrines were noted above 1,794 meters (6,000 ft.). Just 28 per cent of all cliffs visited are above 1495 meters (5,000 ft.) and only 11 per cent of the peregrine observations occurred there. These

TABLE 16: FINAL RESULTS FOR ENHANCEMENT CLIFFS IN THE MENDOCINO, SIX RIVERS, KLAMATH, & SHASTA-TRINITY NATIONAL FORESTS (CONT'D)

			COLUMN					
A	B	C	D	E	F	G	H	I
Site #	Helicopter Rating	Helicopter Classification	Final Rating	Final Classification+	DNAS in km**	Enhancement Score	Enhancement Ranking	Ranking By Forest
65	4.5	Pos	24	Pos	24.8	- 0.8	18B	6
66	None	Pos	21	Pos	11.2	+ 9.8	11B	3
67	4.5	Pos	23	Pos	49.6	-26.6	34	10
67A	5.5	Pos/H-S	21	Pos	43.2	-22.2	30B	9
69	6.0	Pos/Pot	31	Pos	29.6	+ 1.4	17	5*
72A	5.0	Pos	27	Pos	35.2	- 8.2	24	8
74	None	None	22	Pos	9.6	+12.4	8	2
74A	None	None	26	Pos	12.8	+13.2	7	1*
90	4.25	Pos	39	Pos	36.8	+ 2.2	16B	4
91	6.0	Pos	34	Pos	41.6	- 7.6	23A	7*
26	6.0	H-S/Pos	36	H-S	57.6	-21.6	29	11
93A	4.0	Pos	28	H-S	12.8	+15.2	5	5*
94	4.0	Pos	32	Pos	10.4	+21.6	3	3
95	4.5	H-S	23	Pos	15.2	+ 7.8	12A	7A
97	5.25	Pos	27	Pos	17.6	+11.0	9	6*
103	None	None	23	Pos	27.2	+17.0	4	4
104	4.0	Pot/Pos	23	Pos	24.0	- 1.0	19	8
114	5.5	H-S	23	Pos	15.2	+ 7.8	12B	7B
117	5.0	Pos	40	H-S	15.2	+24.8	2	2*
124	6.0	Pos	37	Pos	5.6	+31.4	1B	1*
207	5.5	Pos	34	Pos	50.4	-16.4	27	10*
208	4.0	Pos	23	Pos	36.8	-13.8	26	9

Key
* indicates authors' choice for enhancement
** distance to nearest active site (1979)
+ see table 10 for classification key

TABLE 16: FINAL RESULTS FOR CLIFF ENHANCEMENT IN THE MENDOCINO, SIX RIVERS, KLAMATH, & SHASTA-TRINITY NATIONAL FORESTS

				COLUMN				
A	B	C	D	E	F	G	H	I
Site #	Helicopter Rating	Helicopter Classification	Final Rating	Final Classification	DNAS in km**	Enhancement Score	Ranking	Ranking By Forest
1	4.5	Pos	29	Pos	51.2	-22.2	30A	6
1A	4.5	Pos	27	Pos	52.0		33	9
4	4.25	Pos/Pot	27	Pos	48.0	-21	28	5*
7	4.25	H-S/Pos	31	Pos	49.6	-24.4	32	8
8	5.0	Pos/Pot	27	Pos	38.4	-11.4	25	4
15	5.75	Pos	36	Pos	25.6	+10.4	10	1*
16	6.0	Pos	28	Pos	32.0	- 4.0	22	3*
19	4.0	Pos	32	Pos	54.4	-22.4	31	7
23	5.5	Pos/H-S	31	H-S	28.8	+ 2.2	16A	2
27	3.75	Pos/H-S	27	H-S/Occ	28.8	- 1.8	20	9
28	4.0	Pos	28	H-S	28.8	- 0.8	18A	8
29	6.0	H-S/Pos	36	H-S/Pos	28.8	+ 7.7	13A	5A*
30	6.0	H-S	36	H-S	28.8	+ 7.2	13B	5B*
35	6.0	H-S/Pos	30	Pos	16.0	+14.0	6	3*
40A	None	H-S	31	Pot/H-S	25.6	+ 5.4	14	6*
43	3.5	Pot	22	Pos	19.2	+ 2.8	15	7
45	4.0	Pot	28	Pot	12.8	+15.2	5	2*
49A	2.75	Pos	18	H-S	25.6	- 7.6	23A	12
49B	5.0	Pos	22	H-S	25.6	- 3.6	21A	10A
49C	5.0	Pos	22	H-S	25.6	- 3.6	21B	10B
57	4.0	His/Pos	32	Occ	0.0	+32.0	11A	4*
56	2.5	Pot	26	Pos	16.0	+10.0	1A	1*

Key
* indicates authors' choice for enhancement
** distance to nearest active site (1979)

Table 17. Surveyed cliffs and their corresponding elevations per Forest. Elevations of peregrine cliffs included

Elevation Zones	No. of Peregrine Cliffs* per elev. zone	Per Cent of Total (n=19)	No. of GS Cliffs per elev. zone per For. Mendocino	Six Rivers	Klamath	Shasta-T	Forest Totals	% of Total (n=138)
0- 999' 0- 298 m	0	0	0	0	0	0	0	0
1000-1999' 299- 599 m	2	11	2	2	7	0	11	8
2000-2999' 600- 898 m	5	26	6	3	4	4	19	14
3000-3999' 899-1197 m	6	32	12	12	9	10	43	32
4000-4999' 1198-1496 m	4	21	2	8	11	5	26	19
5000-5999' 1497-1795 m	2	11	5	7	9	2	23	17
6000+ ' 1796+ m	0	0	1	2	8	5	16	12
TOTALS	19	100	28	34	48	28	138	100

*refers to all sites in Mendocino, Six Rivers, Klamath, and Shasta-Trinity National Forests where Peregrine Falcons were seen during the helicopter and ground survey

data support Bonds observations.

The authors found that above 1794 meters (6,000 ft.) the temperatures were commonly under 0 degrees Centigrade (32 degrees F.). These cool temperatures were noted throughout the day! Such cold temperatures reduce the possibility of finding nesting peregrines. Many potential nesting ledges were covered with snow. During the helicopter survey, site # 107 was checked. This site was rumored to have been active in 1978. The site is located at 2600 meters (8,700 ft.) elevation. The entire area was blanketed with snow and the lake below the cliff was frozen solid. Enderson (pers. comm.) has noted peregrines at 1794 meters (6,000 ft.) elevations in Colorado during conditions which he describes as "the dead of winter". He continued to note however, that within two weeks time the snow had melted and spring was in full swing.

Project Time Expenditures

Aerial photo interpretation and light plane reconnaissance required 480 man hours. The helicopter survey involved 28 'in air' hours and many additional hours moving between forests and airports. Table 7 shows the helicopter flight schedule. The ground survey observation time totaled 704 hours (not including transportation to and from the site) for the 81 sites. Final analysis of the ground survey results amounted to 60 man hours. The preparation of three written reports required a minimum of 500 hours in data organization and presentation. Total hours expended (excluding transportation to and from sites) equaled 1,693 man hours. Approximately 400 additional hours of transportation time were required to get to and from the sites.

DISCUSSION

Project Limitations

Aerial photo-interpretation suffers from: photographic quality, lost or missing photographs, shadows in photographs (dictated by the time of day when the picture was taken and the angle from which it was taken). Light plane reconnaissence was limited by weather conditions. Clouds cast shadows which may have hid 'sleepers'. However, it is a very good technique to check on aerial photo-interpretation.

Helicopter analysis is limited by the type of helicopter, pilot experience, weather, observer experience, and timing of each flight. Two other helicopters (Llamma and Bell Jet Ranger III long version) would have been superior in power, safety, observational excellance but inferior in operational costs. Our pilot was excellent. We encountered bad weather on three occasions, twice in Six Rivers National Forest and once again in the Klamath Forest. Less than six per cent of the sites were affected by weather.

Budgetary constraints allowed for only one series of flights as part of this project. The question became which flight schedule would yield the greatest amount of information? Flying towards the nesting season's end increases the probability of observing productivity at falcon nests. However virtually no information is gathered on site failures due to nest site abandonment. Also, single adult or sub-adult birds, which occupy a site early in the season, lose attachment as the season progresses and would probably be missed by flights scheduled toward seasons end. More

importantly, no region wide information would be gathered on the extent, if any, of possible widespread nesting failures. Recall that the authors (White and Boyce 1977) found widespread peregrine nesting failure along the Coleville River in Alaska by surveying early and returning later to check on nest productivity. This phenomenon would not have been discovered with one flight late in the season. Also, flying early would identify many sites, if not all, which would be seen during later flights.

Two helicopter survey flights were made in the beginning of April. The first flight occurred before incubation began. The authors believe the second flight coincided with the beginning of incubation. Therefore timing was a definite limitation. Higher reliability would have been achieved if both flights were made prior to the start of incubation. Ideally two flights should be scheduled to include the period before incubation and another prior to fledging (just before the young leave the nest).

A bias resulted in the final analysis when a greater value was given to cliffs occupied by falcons than those without. In reality minor modifications at unoccupied sites may make them as suitable as occupied sites. Recognizing this bias, Table 18 was prepared to show the comparative results when bias was removed. Both biased and unbiased results are shown side by side. When the bias was removed,figures vary approximately 3-10 per cent for each category. Notice the relative correlation between biased and unbiased data while moving down the table. The authors believe that this bias was of minor importance.

There may be factors operating to limit peregrine nest site use which were not addressed during this study. Researchers, by no means, have discovered and accounted for all important paramaters-associations operating

Table 18. Comparison between final rating score for cliffs and adjusted scores to remove bias (see text for discussion)

CLIFFS	Original		Bias Removed	
Total Sample Size (n=81)	81		81	
Mean Final Score ± 1 S. D.	23.52 ± 11.47		18.75 ± 11.99	
	Score	Per Cent	Score	Per Cent
Number of cliffs below mean (Per Cent used by all falcons	38	3	25	4
Number of cliffs above mean	43	33	53	51
Number used by peregrines above mean (%)	13	30	13	25
Number used, plus locations where peregrines were seen, above the mean	19	44	19	36
Number used by Prairie Falcons above the mean	7	16	7	13
Number used by Prairie Falcons or seen used by Prairie Falcons	8	17	8	15
Number above mean occupied by all falcons	27	63	27	51
Number above score of 30 used by peregrines	16	57	16	52
Number above score of 30 used by all falcons	21	75	17	68

on nesting peregrine falcons. The authors recognize this important fact.

Undoubtedly the most difficult category to address is the feeding habitat availability and its quality. Habitat parameters have yet to be defined by biologists! Bond (1946) reports that prey is a function of

habitat availability and quality. He states, "An especially good food supply may be an attraction, but peregrines nest in places that seem to be about as low in prey as are most areas without any falcons". Enderson (pers. comm.) found that factors other than prey availability were governing use or non-use of nests in Colorado. Others, (Porter and White 1973) have noted strong relationships with prey. For example peregrine nests in Utah were closely linked with marshes that attracted prey species. When the marshes were removed or lost through natural causes, the falcons became extinct in the area.

Reliability

The reliability question is dictated by the type of information an agency seeks to obtain. Are large blocks of ground to be covered or is intensive work on small areas desired? Are the number of single 'floaters' or singles attached to cliffs important? Is an overall population perspective desired? Are the number of pairs returning to territories important? Is productivity (fledging) desired? There exists a multitude of questions that can be addressed.

Gathering in depth site specific information involves more than a three minute helicopter visit unless a status determination is of primary importance. However, it is cost effective to eliminate unsuitable cliffs, via helicopter evaluation, from costly ground analysis. Table 19 shows that helicopter analysis alone (early in the season) appears reliable to the 60 per cent level. Ground checks conducted after the helicopter survey demonstrate a 70 per cent reliability level. Combining both techniques reveals a reliability on the order of 85 per cent. An additional helicopter flight at the nesting seasons end could increase reliability by as much as five per cent due to different time schedule.

Table 19. Peregrine and Prairie Falcon cliff Results

Site number	Status	Helicopter	Ground	Combined results	
123	Known	no	yes	yes	
53b	Known	yes	yes	yes	
52	Known	yes	yes	yes	
53a	Suspect	yes	yes	yes	
86	Known	no	yes	yes	
57	suspect	no	no	no	
115	suspect	no	no	no	
84	unknown	yes	yes	yes	
40a	unknown	yes	no	yes	PEREGRINE
37b	Known	yes	yes	yes	SITES
98a	Known	yes	yes	yes	
37a	Known	yes	yes	yes	
47	suspect	yes	no	yes	
37	Known	yes	yes	yes	
53c	suspect	no	yes	yes	
76	unknown	no	no (yes)	no	
N=16	K=8	yes=10	yes=11	yes=13	
	UK=3	no =6	no =5	no =3	
	sus=5	% =63	% =69	% =81	
3	Known	yes	yes	yes	
15	Known	no	no	no	(not active 1979)
1	Known	no	yes	yes	
7	Known	no	yes	yes	
16	Known	no	-	-	
90	Known	yes	yes	yes	PRAIRIE
91	Known	yes	yes	yes	SITES
205	Known	yes	-	yes	
207	Known	yes	no	yes	
210	Known	yes	-	yes	
N=10	K=10	yes=6	yes=5	yes=9	
		no =4	no =2	no =1	
		% =60	% =71	% =89	
		TOTALS			
N=26	Known=18	yes=16	yes=16	yes=22	
	Unknown=3	no =10	no =7	no =4	
	Suspected=5	% =62	% =70	% =85	

The difficulty in assessing ground reliability is underscored by the following examples. Over 13 hours were spent observing a cliff area

considered to be prime peregrine nesting habitat. However, no falcons were seen during that period. Frank Baldridge, U.S. Bureau of Land Management wildlife biologist, spent eight additional hours at this same site and finally located a pair of nesting peregrines. Another cliff area in the Six Rivers Forest was visited repeatedly thinking peregrines just had to be nesting there. On the last visit an adult was observed. An enforcement agent for the U.S. Fish and Wildlife Service spent two days at a cliff known to have peregrines nesting on it before the birds were finally observed. Clearly, peregrines are elusive and difficult to locate even when exact nesting areas are known.

When surveying large blocks of land, cliff rating is the necessary first step in identifying sites most likely to be occupied. Thus by using a filter process surveyors zero in on the better cliffs. Therefore, based on what a Forest Supervisor wants, he must decide on the adequacy of the data collected. If a Forest Supervisor is satisfied with 85 per cent reliability, then this study data is adequate.

To increase reliability we could suggest an on-the-ground inspection of each and every cliff for a minimum of one day. Another flight prior to fledging would also increase reliability. Either option would increase the survey cost by 25 per cent, or more.

In order to assess the contractor's survey technique reliability, the Forest Service provided test sites as a check. Table 20 shows the combined results of both helicopter and ground survey findings at these sites.

Table 20. U.S.F.S. reliability test sites

Site number	Site status	Helicopter	Ground	Combined
37b	active pair	confirm	confirm	confirm
37	active pair	confirm	confirm	confirm
98a	active pair	confirm	confirm	confirm
52	active pair	confirm	confirm	confirm
53a	defending male	confirm	confirm	confirm
53b	active pair	confirm	confirm	confirm
86	active pair	missed	confirm	confirm
123	active pair	missed	confirm	confirm
110*	active pair	missed	confirm	confirm
57	defending male	missed	missed	missed
N=10	pairs = 8 singles = 2	60%	90%	90%

* falcon seen at this site during fixed wing flight

RECOMMENDATIONS

Three types of recommendations are offered. The first recommendation is site specific and pertains to sites visited on the ground. These recommendations, compiled by ground team members, may be found in the appendix. The second set of recommendations are broadly applicable in each forest. The third set of recommendations focuses on the theory of ecosystem management and island biogeography. The following is a list of recommendations (2nd set) pertaining to all forests. The order in which they appear does not imply priority.

1. Historical or Active Sites: protect each nest site's integrity by closing an area, within one mile (1.6 km) of nest, from all types of human disturbance. Create a buffer zone extending eight kilometers (5 miles) where disturbances are carefully monitored.

2. Occupied-Highly Suspected Sites: Create buffer zones around the sites until further research establishes presence or absence of nesting falcons. These buffer zones should exclude all human disturbances which may alter the habitat until a conclusion is reached.

3. Evaluate sites with high potential for enhancement projects to encourage peregrine nesting.

4. Determine prey vulnerability, densities, and diversities at all Historical, Active, Occupied, and Highly Suspected sites.

5. Determine the effects that management programs such as clear cutting, selective cutting, herbicide application, and commercial development have on prey densities, diversities, and vulnerabilities in habitats similar to those already used by nesting peregrines.

6. Attempt to manage habitats for increased prey production. For example planting Elderberry in clear-cut areas may increase the Band-tailed Pigeon population (Band-tails are a favorite prey of peregrines in northwestern California forests).

7. Review the present snag retention policy. Determine if it would

7. (con't) jeopardize prey production. We suggest 100 per cent snag retention around eyries (peregrine nesting sites).

8. Make a concerted effort to collect all prey remains from any active or occupied site. Differential prey use may then be established. Concurrently collect and analyze potential prey species (near nests) for chlorinated hydrocarbon residues.

9. Determine habitat composition. Calculate the frequency of vegetational types within 10 kilometers of Peregrine Falcon eyries.

10. Determine habitat use by adult peregrines during the breeding season.

11. Determine Post-fledging habitat use by the young falcons.

12. Create a northwestern California National Forests threatened and endangered species specialist who could evaluate all proposed activities near endangered species sites. This individual could coordinate research and implement constructive policies.

Our final recommendation pertains to ecosystem management. Important ideas for managing natural areas, such as buffer zones around peregrine nests, come from studies which examine animal responses to island settings. Pioneering island biogeography studies were published by Robert MacArthur and E.O. Wilson in 1963. Their work remains the intellectual cornerstone for other dynamic biogeographical studies which followed.

Throughout the world today, habitats are undergoing vast changes brought about by man. These changes are of two types; shrinkage of natural areas and secondly, the fragmentation of formerly continuous natural habitats. Ecosystem preservation is usually accomplished by setting aside the more valuable lands as preserves. In the case of the peregrine, a buffer zone boundary or a critical habitat designation may become the delineators for such a preserve. Usually human land use within the preserve is prevented. However land use outside the preserve is not restricted. As a result, preserves, buffer zones, and critical habitats become terrestrial 'islands' surrounded by a sea of multiple human land use practices. Therefore, realizing the goal of proper ecosystem management,

especially for endangered species, requires a conceptual understanding of island biogeography.

Some important ideas generated from island biogeographical studies are:

1. The number of species on an 'island' is a function of island size and habitat diversity.
2. An islands' species equilibrium, the point at which species extinction rates equal species immigration rates, is a function of that islands proximity to a major species colonization source.
3. Species extinction rates are higher on smaller islands than on larger islands.
4. Specialists are more prone to extinction than generalists.
5. Islands which are further away from a species' colonization source have fewer total species than islands that are closer.

The aforementioned ideas as well as others have been used to generate geometrical designs and ideas for the shaping of natural preserves. Diamond (1975) discusses designs which would best maintain the integrity and intent of setting aside a preserve. Figure 6 shows the design principles that Diamond has generated. The first geometric principle (A) is that large preserves are better than small preserves. Large preserves have the inherent ability to hold more species at equilibrium thereby reducing species extinction rates. The second principle (B) is that one large area is better than several small areas. The probability of species survival is higher in a large reserve than in a small reserve. The third principle (C) is that if the only choice is having several small reserves, then it is better to have reserves located as close as possible to each other since close proximity increases immigration rates and decreases extinction rates. The fourth principle (D) is equal distances between preserves is superior to unequal or linear grouping. Again immigration rates are increased. A linear relationship requires distally located species to immigrate further than proximal species. The fifth principle (E) states that corridor

linkages between reserves enhance immigration rates. Species will more readily disperse through suitable habitat than through foreign habitat. Finally (F) reserves should be circular in shape. This minimizes dispersal distances within the reserve itself. Pennisula effects are known to increase extinction rates.

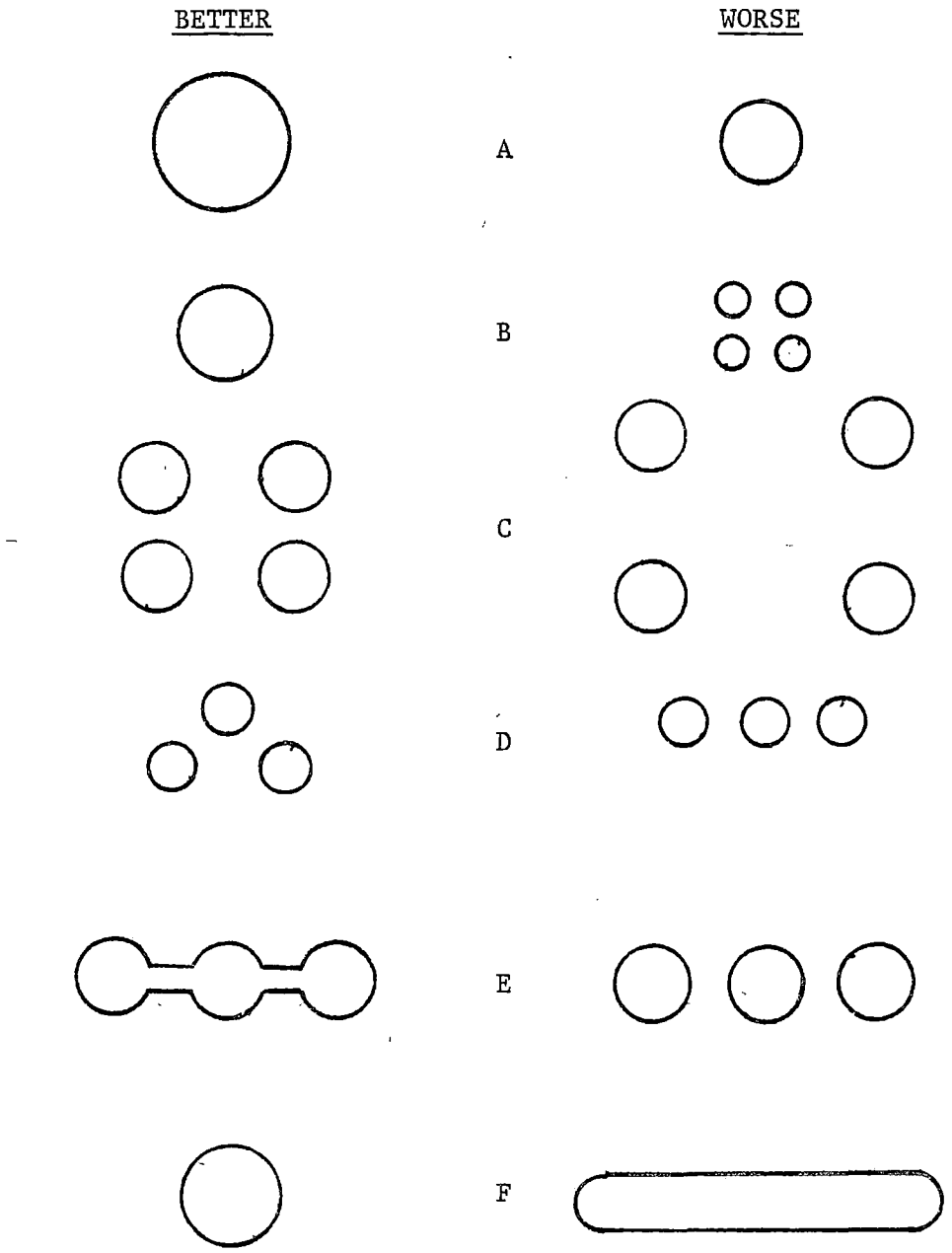


Figure 6. Geometrical designs for shaping preserves. (extinction rates will be lower for the preserves on the left)

The aforementioned ideas and designs may be applied to peregrines. First a peregrines 'island' size must be defined. Either arbitrary deliniation (critical habitat boundary or buffer zone boundary) or biological deliniation must be decided upon. Arbitrary deliniations may vary between 1 - 16 kilometers in size. Biological boundaries reflect observed peregrine habitat use. Biological boundaries are preferred by the authors since they are a direct function of a peregrines ability to respond to a matrix of habitat productivity near the nest. The peregrine's maximum foraging radius may be thought of as the energetic edge of its 'island'. Beyond the island's edge, prey pursuit, prey capture, and prey handling time are energy drains causing lowered nest productivity.

A linear logarithmic relation exists between island size and prey species number. As an islands size is decreased the prey production on that island decreases. Decreased prey production forces adults to forage further afield in an attempt to feed themselves and their young. This uttimately increases energetic costs and causes lowered peregrine production. The further an island is from habitat which produces prey in adequate numbers the less likely a pair of peregrines will have in surviving. Lower survivorship results from lower prey immigration rates onto islands which are far away as opposed to islands that are located close by.

Peregrines eat birds exclusively, which are captured in flight. Peregrine survival depends on adequate and vulnerable prey base. More than preserving the nest site is required if the falcons are to survive! The peregrine prey base must be maintained.

Little or no foraging data exists for northwestern Peregrine Falcon nests. In view of this fact, establishment of arbitrary boundaries,

which are small in size may cause peregrine nesting failure or nest site abandonment. The authors suggest that isolated nesting sites be strictly protected within 1.6 kilometers (1 mile) of the eyrie (to reduce human disturbance) and carefully manage up to 16 kilometers away (to protect needed prey production). Moreover, all active sites located along the Klamath, Salmon and Trinity Rivers should be managed as one functional unit. The ultimate success of these falcons will depend upon such an approach. This may mean closing these drainages to all types of habtat alterations until peregrine habitat use is established for that area.

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APPENDIX A

A PEREGRINE FALCON NESTING HABITAT SURVEY IN THE MENDOCINO NATIONAL FOREST - 1979

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HELICOPTER RESULTS

SITE NAME: ROCKY RIDGE

SITE NUMBER: 1

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 0741

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 59 m (200 ft)

TOTAL SCORE: 4.5

CLIFF SCORE: 2.5

LEDGE SCORE: 2.0

GROUND VISIT: Yes

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x			x	
Ledge Quality					x	
Ledge Location	x	x	x		x	
Enhancement Potential			x			
Human Disturbance			x		x	
Overall Impression		x			x	

COMMENTS:

-South facing

-Red cliffs across the canyon look as good as these cliffs(see site 1A)

-Scrub habitat

-Whitewash visible

-Maybe an eagle or prairie roost

-No birds seen

HELICOPTER RESULTS

SITE NAME: RED ROCK

SITE NUMBER: 1A

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 0746

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 46-59 m (150-200 ft)

TOTAL SCORE: 4.5

CLIFF SCORE: 2.0

LEDGE SCORE: 2.5

GROUND VISIT: Yes

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			
Ledge Quality		x				
Ledge Location						
Enhancement Potential			x			
Human Disturbance			x			
Overall Impression		x				

COMMENTS:

-Adjacent to #1 - Rocky Ridge

-1 good whitewash spot-looks like a roost spot

-Only 1 spot for enhancement

HELICOPTER RESULTS

SITE NAME: HORSE ROCK

SITE NUMBER: 2

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 0750

TOTAL TIME AT SITE: 30 sec.

RAPTORS SEEN: None

CLIFF HEIGHT: 15-18 m (50-60 ft)

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location	x			x		
Enhancement Potential	x			x		
Human Disturbance	x				x	
Overall Impression	x			x		

COMMENTS:

-Very small outcrop near road

-Real low

-No ledges or enhancement potential

-Elevation: 4700 ft.

-Proximity to water: 2.5 miles

HELICOPTER RESULTS

SITE NAME: BARTLETT MOUNTAIN/PINNACLE POINT

SITE NUMBER: 2A

DATE VISITED: 4/7/79

TOTAL SCORE: 3.5

TIME OF ARRIVAL:

CLIFF SCORE: 1.5

TOTAL TIME AT SITE:

LEDGE SCORE: 2.0

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT: 25-30 m (85-100 ft)

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x				
Ledge Quality		x				
Ledge Location						
Enhancement Potential			x			
Human Disturbance	x					
Overall Impression		x				

COMMENTS:

-Location of site is 2 miles from site #1 in NW direction - 30 ^{o} N

-Housing development 2 miles away

-Jumbo boulders

-Recent fire or insect damage

-Dead trees - opens up habitat

-Cliffs look better from distance than close up; cliffs aren't vertical 70^{o} slope; sloping talus

-Road on backside of cliffs within 100 yards

-Some good fractures and ledges but rather poor overall due to slope

-Elevation: 3600 ft; Proximity to water: 4.5 miles

HELICOPTER RESULTS

SITE NAME: GOAT ROCK

SITE NUMBER: 3

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 0759

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: Adult Prairie Falcons

CLIFF HEIGHT: 59 m (200 ft)

TOTAL SCORE: 5.5

CLIFF SCORE: 2.5

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Historical

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality			x			x
Ledge Location		x			x	
Enhancement Potential		x			x	
Human Disturbance				x		
Overall Impression					x	

COMMENTS:

-Ledge quality = 3.0 with the enhancement; "good reconstruction job" referring to the articial ledge that was installed October 1978

-Pair of Prairie Falcons on enhanced ledge; 4-5 egg clutch; male and female Prairie Falcons both flushed & flew around in vicinity

-Habitat- open pine forest similar to Colorado and Arizona Peregrine Falcon habitat

-Stream

-Snow at base of cliff

HELICOPTER RESULTS

SITE NAME: DEAFY GLADE

SITE NUMBER: 4

DATE VISITED: 4/7/79

TOTAL SCORE: 4.25

TIME OF ARRIVAL: 0804

CLIFF SCORE: 2.75

TOTAL TIME AT SITE: 3.5 min.

LEDGE SCORE: 1.5

RAPTORS SEEN: None

GROUND VISIT: Yes

CLIFF HEIGHT: 44 m (150 ft)

STATUS: Possible/Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x		x		
Ledge Quality			x			
Ledge Location				x		
Enhancement Potential			x			x
Human Disturbance		x			x	
Overall Impression		x			x	

COMMENTS:

-Cliff in bottom of drainage in river bottom - stream right below

-South-facing; north side zip

-Good habitat around it - NW & SE - lots of broken habitat

-One crack on top third of cliff, few ledges - located on lower half

-Good potential for enhancement; good test case; might be well worth modification to answer question of suitability of habitat that was opened up by buildings - to test if suitable for prairies or peregrines- would give a better idea as to suitability of imposing cliffs vs. hidden, inaccessible, teeny cliffs

-Would be a good place for an eyrie: hidden, down in a valley, doesn't command a big view

HELICOPTER RESULTS

SITE NAME: SNOW MOUNTAIN

SITE NUMBER: 6

DATE VISITED: 4/7/79

TOTAL SCORE: 3.25

TIME OF ARRIVAL: 0815

CLIFF SCORE: 1.75

TOTAL TIME AT SITE: 7 min.

LEDGE SCORE: 1.5

RAPTORS SEEN: Amer. Kestral

GROUND VISIT: No

CLIFF HEIGHT:

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability				x		
Ledge Quality					x	
Ledge Location						x
Enhancement Potential						
Human Disturbance						
Overall Impression		x				

COMMENTS:

-3800 ft elevation

-Several cliffs in canyon along north face - not vertical

-Eagle roost

-Kestral flying

-Proximity to water: 3 miles

HELICOPTER RESULTS

SITE NAME: MT. ST. JOHN

SITE NUMBER: 7

DATE VISITED: 4/7/79

TOTAL SCORE: 4.25

TIME OF ARRIVAL: 0827

CLIFF SCORE: 2.5

TOTAL TIME AT SITE: 3 min.

LEDGE SCORE: 1.75

RAPTORS SEEN: None

GROUND VISIT: Yes

CLIFF HEIGHT: 29-74 m (100-250 ft)

STATUS: Highly Suspected/Poss.

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability				x		
Ledge Quality				x		
Ledge Location				x		
Enhancement Potential					x	
Human Disturbance						x
Overall Impression					x	

COMMENTS:

-5100 ft elevation

-All west facing cliffs

-Vertical cracks; no horizontal ledges visible

-One large vertical face (250 ft) ; green & red lichen ; probably has not been used as a site

-One Prairie Falcon (female) here in 1978 with whitewash

HELICOPTER RESULTS

SITE NAME: COPPER BUTTE

SITE NUMBER: 8

DATE VISITED: 4/7/79

TOTAL SCORE: 5.0

TIME OF ARRIVAL: 0833

CLIFF SCORE: 3.0

TOTAL TIME AT SITE: 3 min.

LEDGE SCORE: 2.0

RAPTORS SEEN: None

GROUND VISIT: Yes

CLIFF HEIGHT: 90 m (300 ft)

STATUS: Possible/Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x	x		
Ledge Quality			x	x		
Ledge Location	x	x	x	x		
Enhancement Potential			x		x	x
Human Disturbance	x				x	
Overall Impression		x		x		

COMMENTS:

-Vertical faces; fractured; some horizontal ledges; nothing great

-One vertical face halfway down side of mountain is suitable for ledge

-No overhangs

-Cliff height varies - about 300 ft top to bottom, but broken up

-Jagged bunch of volcanic rock

-Disturbance - road near base

-Overall: not very good

HELICOPTER RESULTS

SITE NAME: BLOODY ROCK

SITE NUMBER: 9

DATE VISITED: 4/7/79

TOTAL SCORE: 3.5

TIME OF ARRIVAL: 0838

CLIFF SCORE: 1.75

TOTAL TIME AT SITE: 1 min.

LEDGE SCORE: 1.75

RAPTORS SEEN: Goshawk

GROUND VISIT: No

CLIFF HEIGHT: 22 m (75 ft)

STATUS: Potential/Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability				x		
Ledge Quality	x			x		
Ledge Location		x		x		
Enhancement Potential		x			x	
Human Disturbance		x	x		x	
Overall Impression				x		

COMMENTS:

-2800 ft elevation; 75 ft boulder-like rock

-Habitat broken; pine & chaparral - scrubby

-One good spot for a ledge; good overhang for enhancement potential

-No potential unless site is enhanced; unsuitable as is

-Possibly not worth enhancing

-Four wheel drive roads

-Goshawk seen flying

-Proximity to water: .5 miles

HELICOPTER RESULTS

SITE NAME: UPPER EEL RIVER AREA

SITE NUMBER: 10

DATE VISITED: 4/7/79

TOTAL SCORE: 4.0

TIME OF ARRIVAL: 0845

CLIFF SCORE: 2.5

TOTAL TIME AT SITE: 4 min.

LEDGE SCORE: 1.5

RAPTORS SEEN: American Kestral & Sharp-shinned Hawk

GROUND VISIT: Yes

CLIFF HEIGHT: 18-44 m (60-150 ft)

STATUS: Possible/Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White 1	White 2	White 3	Boyce 1	Boyce 2	Boyce 3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression		x				

COMMENTS:

-Long series of cliff - segments starting at lower end & working up canyon

-Lower River- overhangs, some room for enhancement, no whitewash, some vertical faces, one good cliff- second cliff up creek going north, third & fourth cliff- nothing

Upper River- good spot for an artificial ledge (nice overhang), no whitewash, 150 ft cliff; fifth cliff- not so hot, cliff isn't vertical, only 55-60 ft

-Overall impression for entire canyon = 2

HELICOPTER RESULTS

SITE NAME: OLDMAN RIDGE/HORSE PASTURE RIDGE

SITE NUMBER: 11

DATE VISITED: 4/7/79

TOTAL SCORE: 3.5

TIME OF ARRIVAL: 0855

CLIFF SCORE: 2.5

TOTAL TIME AT SITE: 1.5 min.

LEDGE SCORE: 1.0

RAPTORS SEEN: Red-tailed Hawk

GROUND VISIT: No

CLIFF HEIGHT: 18-22 m (60-75 ft)

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x					
Ledge Quality	x					
Ledge Location						
Enhancement Potential		x				
Human Disturbance			x			
Overall Impression				x	x	

COMMENTS:

-60-75 ft round knob

-Red-tailed Hawk flushed off of cliff; cliff must have some potential

-Red-tailed Hawk just roosting - no nest

-One overhang area

-Potential, though rather low

-Habitat- scrub & madrone

-Elevation: 2500 ft

-Proximity to water: 2 miles

HELICOPTER RESULTS

SITE NAME: CHIMNEY ROCK

SITE NUMBER: 12

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 0858

TOTAL TIME AT SITE: 3 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 74-89 m (250-300 ft)

TOTAL SCORE: 3.5

CLIFF SCORE: 2.5

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability				x		
Ledge Quality				x		
Ledge Location						
Enhancement Potential				x	x	
Human Disturbance						x
Overall Impression					x	

COMMENTS:

-Volcanic conglomerate spire

-Cracks, but no ledges

-Elevation: 2500 ft

-Proximity to water: 3 miles

-Chaparral/scrub habitat

HELICOPTER RESULTS

SITE NAME: TABLE ROCK

SITE NUMBER: 13

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 0905

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: Golden Eagle

CLIFF HEIGHT: 22-44 m (75-150 ft)

TOTAL SCORE: 3.5

CLIFF SCORE: 2.0

LEDGE SCORE: 1.5

GROUND VISIT: No

STATUS: Possible*

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x					
Ledge Quality	x					
Ledge Location	x					
Enhancement Potential						
Human Disturbance		x				
Overall Impression						

COMMENTS:

-3400 ft elevation, 75 ft east face, 150 ft west face

-Active Golden Eagle nest with female (adult) on top, didn't budge

-A falcon would be usurped by the eagles

-Except for the eagles, a good cliff, good potential

-Good potential if eagles weren't there*

-Some whitewash, no ledges, some overhangs

-Proximity to water: 2.5 miles

-Chaparral/scrub habitat

HELICOPTER RESULTS

SITE NAME: WHITE HAWK RIDGE

SITE NUMBER: 14

DATE VISITED: 4/7/79

TOTAL SCORE: 2.0

TIME OF ARRIVAL: 1017

CLIFF SCORE: 1.0

TOTAL TIME AT SITE: 3 min.

LEDGE SCORE: 1.0

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT: 15-30 m (50-100 ft)

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location	x					x
Enhancement Potential	x			x	x	
Human Disturbance		x			x	
Overall Impression	x			x		

COMMENTS:

-South-east facing; totally covered with vegetation on the back side -NW

-Small cliff: 100 ft base, 50-75 ft talus; face not vertical - 75° slope

-Smaller cliff lower down, concealed by trees

-Nice large overhang on top third of cliff

-Road opposite & burn pile

-Poor cliff, not enough vertical faces, unsuitable

-Elevation: 2300 ft

-Proximity to water: adjacent to site (overlooks river)

HELICOPTER RESULTS

SITE NAME: TWIN ROCK

SITE NUMBER: 15

DATE VISITED: 4/7/79

TOTAL SCORE: 5.75

TIME OF ARRIVAL: 1015

CLIFF SCORE: 3.0

TOTAL TIME AT SITE: 4 min.

LEDGE SCORE: 2.75

RAPTORS SEEN: None

GROUND VISIT: Yes

CLIFF HEIGHT: 59 m (200 ft)

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality		x			x	
Ledge Location	x	x	x			
Enhancement Potential			x			x
Human Disturbance			x			
Overall Impression		x			x	x

COMMENTS:

-Prairie Falcons nested here in 1978

-Great looking rocks

-Cliff that's north facing has lots of ledges

-Several good overhangs; good enhancement potential

-Band-tailed pigeons

HELICOPTER RESULTS

SITE NAME: THE GORGE

SITE NUMBER: 16

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 1003

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 118 m (400 ft)

TOTAL SCORE: 6.0

CLIFF SCORE: 3.0

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality			x			
Ledge Location			x			
Enhancement Potential			x			
Human Disturbance		x				
Overall Impression			x			

COMMENTS:

-2500 ft elevation

-Both north & south facing cliffs, river cuts east-west

-Some roost spots across the river

-Upriver: other cliffs broken, fractured 70° slope

-Occupied by Prairie Falcons in 1978; nothing this year

-Would make a very good site

-Enhancement potential limited; good for prairies, not so hot for peregrines

-Road- goes to building .5 mile up river

HELICOPTER RESULTS

SITE NAME: MIDDLE FORK EEL RIVER

SITE NUMBER: 17

DATE VISITED: 4/7/79

TOTAL SCORE: 5.0

TIME OF ARRIVAL: 1029

CLIFF SCORE: 2.5

TOTAL TIME AT SITE: 5 min.

LEDGE SCORE: 2.5

RAPTORS SEEN: None

GROUND VISIT: Yes

CLIFF HEIGHT: 103-118 m (350-400 ft)

STATUS: Historical/ Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality		x				x
Ledge Location		x		x	x	x
Enhancement Potential		x				x
Human Disturbance				x		
Overall Impression		x				x

COMMENTS:

-Abundance of ledges

-Several tiers on cliff

-Two Band-tailed Pigeons

-Magnificent looking cliff- one of the bigger ones we've looked at

-Peregrine Falcons nested here in 1975 & fledged 3 young (E. O. Wenzel)

HELICOPTER RESULTS

SITE NAME: HELL HOLE CANYON

SITE NUMBER: 18

DATE VISITED: 4/7/79

TOTAL SCORE: 4.0

TIME OF ARRIVAL: 1035

CLIFF SCORE: 2.0

TOTAL TIME AT SITE: 2 min.

LEDGE SCORE: 2.0

RAPTORS SEEN: None

GROUND VISIT: Yes

CLIFF HEIGHT: 44-51 m (150-175 ft)

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x			x	
Ledge Quality		x			x	
Ledge Location		x			x	
Enhancement Potential						
Human Disturbance						
Overall Impression		x			x	

COMMENTS:

-Red lichen

-Upper section not vertical- 70° angle, not very good

-Lower section vertical; good cliffs and ledges with red lichen

HELICOPTER RESULTS

SITE NAME: FOSTER RANCH

SITE NUMBER: 19

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 1040

TOTAL TIME AT SITE: fly by

RAPTORS SEEN: Am. Kestral

CLIFF HEIGHT: 33 m (125 ft)

TOTAL SCORE: 4.0

CLIFF SCORE: 3.0

LEDGE SCORE: 1.0

GROUND VISIT: Yes

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability				x		
Ledge Quality				x		
Ledge Location						
Enhancement Potential						x
Human Disturbance						x
Overall Impression					x	

COMMENTS:

-Cliff positioned midway upslope from river, facing east

-One of the few cliffs in area not located along river bottom; a good vantage point

-Suitable for ledge enhancement

HELICOPTER RESULTS

SITE NAME: RATTLESNAKE CREEK

SITE NUMBER: 20

DATE VISITED: 4/7/79

TOTAL SCORE: 3.0

TIME OF ARRIVAL: 1042

CLIFF SCORE: 2.0

TOTAL TIME AT SITE: 1 min.

LEDGE SCORE: 1.0

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT: 33 m (125 ft)

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability				x		
Ledge Quality				x		
Ledge Location						
Enhancement Potential				x		
Human Disturbance				x		
Overall Impression				x		

COMMENTS:

-High human disturbance, four-wheel drive roads

-Unsuitable

-Elevation: 3000 ft

-Proximity to water: overlooks river

HELICOPTER RESULTS

SITE NAME: ASA BEAN CROSSING

SITE NUMBER: 21

DATE VISITED: 4/7/79

TOTAL SCORE: 4.0

TIME OF ARRIVAL: 1043

CLIFF SCORE: 2.5

TOTAL TIME AT SITE: 1 min.

LEDGE SCORE: 1.5

RAPTORS SEEN: None

GROUND VISIT: Yes

CLIFF HEIGHT: 51 m (175 ft)

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability				x		
Ledge Quality					x	
Ledge Location						x
Enhancement Potential					x	
Human Disturbance					x	
Overall Impression					x	

COMMENTS:

-Good height over river

-Only 1 ledge - on top third of cliff

-Great Horned Owl habitat (suitable trees in vicinity)

HELICOPTER RESULTS

SITE NAME: HAMMERHORN

SITE NUMBER: 22

DATE VISITED: 4/7/79

TOTAL SCORE: 4.0

TIME OF ARRIVAL: 1052

CLIFF SCORE: 2.0

TOTAL TIME AT SITE: 3 min.

LEDGE SCORE: 2.0

RAPTORS SEEN: None

GROUND VISIT: Yes

CLIFF HEIGHT:

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability					x	
Ledge Quality						
Ledge Location						
Enhancement Potential					x	
Human Disturbance						x
Overall Impression					x	

COMMENTS:

-Tape recorder stopped; the following comments are from memory

-North-south ridge

HELICOPTER RESULTS

SITE NAME: NORTH FORK ELDER CREEK

SITE NUMBER: 23

DATE VISITED: 4/7/79

TOTAL SCORE: 5.5

TIME OF ARRIVAL: 1102

CLIFF SCORE: 3.0

TOTAL TIME AT SITE: 5 min.

LEDGE SCORE: 2.5

RAPTORS SEEN: None

GROUND VISIT: Yes

CLIFF HEIGHT: 74-89 m (250-300 ft)

STATUS: Possible/Highly Suspected

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x		x	
Ledge Quality			x		x	x
Ledge Location			x	x	x	x
Enhancement Potential						x
Human Disturbance		x				
Overall Impression			x		x	x

COMMENTS:

-Multiple outcrops along steep drainage, highly fractured, good overhangs

-Upper area has abundance of ledges

-Green lichen

-One particularly good looking ledge with whitewash down river on south side

-Aspect similar to where peregrines nested in 1975 (Middle Fork Eel River)

-Good area, enclosed, down in the canyon

-Heavily mined, 2 roads

GROUND RESULTS

SITE NAME Rocky Ridge

SITE NUMBER 1

		Dates Visited
Forest Name	Mendocino	
Aerial Photo #	N/A	4/29/79
Aerial Photo Rating	N/A	
Quadrangle	Clearlake Oaks	
Legal Descrip.	T15N.R7W.S21&22	
Elevation	3700	
Cliff Height	25-200'; nest cliff:200'(59m)	
Cliff Aspect	predominantly W & N	
Final Classification	Possible	

PREY NOTED: Mourning Dove, Rufous-sided Towhee, Brown Towhee, Black-headed Grosbeak, Common Flicker, Scrub Jay, Band-tailed Pigeon, Quail sp., Sparrow sp., Warbler sp.

RAPTORS NOTED: Kestral, Turkey Vulture, Red-tail Hawk, Prairie Falcons.

FEEDING HABITAT AVAILABILITY AND QUALITY: Open chaparral to the south, forested area immediately to the west, North Fork River canyon to the north, Indian Valley Resorvoir to the east, and Clear Lake to the southwest provide a variety and abundance of foraging habitat.

SITE RELATION TO WATER: Springs are common in the area. Wolf Creek begins close to the site but doesn't become sizeable until about 2 miles s.e. North Fork of Cache Creek is 2 miles north. Indian Valley Reservoir 4½ miles east. Clear Lake about 9 miles south.

DISTURBANCE POTENTIALS: Low. From tracks in the area it appears that there may be some dirt bike operation, but heavy use is not evident. There is inadequate timber in the area to pose logging threat. The area immediately surrounding Rocky Ridge is predominantly roadless.

FACTORS FOR PEREGRINE ESTABLISHMENT: Much rock in the vicinity: a cliff to the s.w. of Rocky Ridge in a canyon with possible suitable ledges; several cliffs along the ridge on the south-facing side, mostly pretty small but one has a pothole with whitewash; and an extensive series of good cliffs with some s.w. aspect on north side of ridge. Near to major water bodies. Prey abundant and varied.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Resident prairie falcons.

MANAGEMENT RECOMMENDATIONS: Check site each year for falcon use. Also check for impact of motorcycle operation early in the spring. If peregrine establishment occurs close the area to ORV use from mid-Feb. to late June, and maintain a guard or frequent patrol to prevent ORV disturbance. Avoid road-building on Rocky Ridge during breeding months.

DIRECTIONS TO THE SITE: Take F.S. road #15N01 just east of Nice to Bartlett Springs. At the ranger station there get key for gate on #15N01, which goes to the base of Rocky Ridge.

ENHANCEMENT POTENTIAL: Enhancement is not recommended; ledges appear adequate.

CONCLUDING COMMENTS: The site is active for prairie falcons in 1979. A pair was observed 4/29, eyrie located with 4-5 eggs confirmed through Celestron. Eyrie location is in a pothole near the top of a granitic cliff on the north-facing side of Rocky Ridge; it has a west aspect.

GROUND RESULTS

SITE NAME Red Rock North Site 1

SITE NUMBER 1A

		Dates Visited
Forest Name	Mendocino	
Aerial Photo #	N/A	4/29/79
Aerial Photo Rating	N/A	
Quadrangle	Clearlake Oaks	
Legal Descrip.	T15N,R7W,S21	
Elevation	3000	
Cliff Height	150-200' (44-59m)	
Cliff Aspect	S	
Final Classification	Possible	

PREY NOTED: See Site #1.
FEEDING HABITAT AVAILABILITY AND QUALITY: See Site #1.
SITE RELATION TO WATER: See Site #1.
DISTURBANCE POTENTIALS: See Site #1.
FACTORS FOR PEREGRINE ESTABLISHMENT: Rock is large and dominant on the landscape (of volcanic origin), with south-facing aspect and ledges. Near to major water bodies.
FACTORS AGAINST PEREGRINE ESTABLISHMENT: Resident prairie falcons on Rocky Ridge 3/4 mile to the south.
MANAGEMENT RECOMMENDATIONS: The site should be checked each year for occupation and success. If peregrine establishment occurs close the area to ORV use by posting, and maintain a guard or frequent patrol to ensure compliance and prevent disturbance, from mid-Feb. to late June.
DIRECTIONS TO THE SITE: See Site #1. From the base of Rocky Ridge hike to top. Rock is on southfacing side of opposite ridge.
ENHANCEMENT POTENTIAL: Enhancement is not recommended; ledges appear adequate.

GROUND RESULTS

SITE NAME Goat Rock

SITE NUMBER 3

		Dates Visited
Forest Name	Mendocino	
Aerial Photo #	N/A	4/29-30/79
Aerial Photo Rating	N/A	
Quadrangle	Clearlake Oaks	
Legal Descrip.	T16N,R7W,S7	
Elevation	5300	
Cliff Height	200' (59m)	
Cliff Aspect	E	
Final Classification	Historical/Possible	

PREY NOTED: Band-tailed Pigeon, Western Wood Peewee, Nuthatch sp., Common Flicker, Pileated Woodpecker, Downy Woodpecker, Yellow-rumped Warbler,

Robin, Stellars Jay, Vireo sp.
RAPTORS NOTED: Goshawk 2 miles away. Prairie Falcons heard vocalizing.
FEEDING HABITAT AVAILABILITY AND QUALITY: Not noted.
SITE RELATION TO WATER: Lower Stony Creek flows west to east 1.5 miles north of the site. Letts Lake and Lily Pond 4-5 miles north. South Fork, Middle Fork, North Fork Stony Creek 7-15 miles north. Clear Lake 12 miles s.w. Water in immediate vicinity of site is not plentiful.
DISTURBANCE POTENTIALS: Moderate. A motorcycle trail runs near the site ¼ mile to the south. Noisy ORV's so close to the cliff in early spring could discourage peregrine, or prairie, establishment or occupation. 1-2 miles east are four residences on a large parcel of private land well supplied with logging roads. In extreme cases, such as wood or timber cutting, the locals' activities could pose disturbance potential.
FACTORS FOR PEREGRINE ESTABLISHMENT: Dominant cliff with whitewash, 200 feet in height, good effective height. Suitable artificial ledge available, presently occupied by prairie falcons. This site, as well as enhanced ledge, is historic for peregrines: active pair with two young reported by Wenzel in 1975.
FACTORS AGAINST PEREGRINE ESTABLISHMENT: Resident prairie falcons.
MANAGEMENT RECOMMENDATIONS: Check site each year for occupation and success. This is a high priority site for close observation; if peregrines accept the artificial ledge and re-occupy the cliff it would be of extreme management interest. Take all necessary steps to minimize disturbance in the vicinity of the site. Restrict motorcycle and ORV use, logging and woodcutting during the breeding season.
DIRECTIONS TO THE SITE: From Stonyford Ranger Station, drive due south about 5 miles and take right turn on road along Lower Stony Creek which goes to Cedar Camp. Follow to Red Rock Cabin and view of rock. Hike up slope for closer look.
ENHANCEMENT POTENTIAL: An artificial ledge was installed on this cliff 9/29-10/2/78 by U.S.F.S. and Wilderness Research Institute. Additional enhancement is not recommended.
CONCLUDING COMMENTS: Site is active for prairie falcons in 1979. Occupation confirmed from helicopter and on ground check. Eyrie was climbed by Boyce (U.S.F.W.S.) in mid-May and 2 young and 2 eggs confirmed. The site was flown fixed-wing by Boyce in mid-June and two ready-to-fledge young were confirmed in eyrie. Eyrie is artificial ledge.

GROUND RESULTS

SITE NAME Deafy Glade

SITE NUMBER 4

		Dates Visited
Forest Name	Mendocino	
Aerial Photo #	N/A	4/30/79
Aerial Photo Rating	N/A	
Quadrangle	Stonyfork	
Legal Descrip.	T17N,R8W,S11	
Elevation	3000	
Cliff Height	175 ft. (51m)	
Cliff Aspect	E-SE, S, SW	
Final Classification	Possible	

RAPTORS NOTED: Turkey Vulture.
FEEDING HABITAT AVAILABILITY AND QUALITY: Not noted.

SITE RELATION TO WATER: South Fork of Stony Creek flows immediately adjacent to the cliff.

DISTURBANCE POTENTIALS: Not noted.

FACTORS FOR PEREGRINE ESTABLISHMENT: Rock is large enough for either large falcon species and has a few possible but not good nesting ledges. Possible faces have aspects of e.-s.e., south, and s.w.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Rock is tucked away along the stream, a large portion of vertical face abuts right over Stony Creek. Only a small portion of the cliff faces downstream, which reduces effective height.

MANAGEMENT RECOMMENDATIONS: The site should be checked next year for sign of falcon activity. The site could be considered for enhancement.

DIRECTIONS TO THE SITE: From Stonyford, proceed west on F.S. road #18N01/M10 to 1 mile past Sanborn Cabin. Rock is visible from the road or take trail to closer view.

ENHANCEMENT POTENTIAL: See photograph for best cliff face for enhancement.

GROUND RESULTS

SITE NAME Mt. St. John

SITE NUMBER 7

Forest Name	Mendocino
Aerial Photo #	N/A
Aerial Photo Rating	N/A
Quadrangle	Stonyford
Legal Descrip.	T18N,R7W,S7
Elevation	5200
Cliff Height	250-300' (74-88m)
Cliff Aspect	W and N
Final Classification	Possible

Dates Visited
5/23-24/79

PREY NOTED: Vicinity of cliff: Vlt-grn Swlw, Wht-thrtd Swft, Twnsnd's Sltr, Drk-eyed Jnco, Yllw-rmpd Warb, Brn Creeper, Mtn Wuail, Mtn Chkdee, Cowbird, Fox Sprw, Hammnd's Flyctchr, Rd-brstd Nuthatch, Rd-brstd Spskr, Canyon Wrn, Olive-sided Flyctchr, Stellars Jay, Cmn Flkr, Lsr Gldfinch. At lower altitudes: Band-tld Pgn, Mrning Dove, Bullock's Oriole, Cowbird, Lark Sprw, Mdw Lark, House and Prpl Fnchs, Acorn Wdpkr, Cmn Flkr, Ash-thrtd Flyctchr, Western Wd Peewee, Wstn Kingbird, Scrub Jay, Vly Quail, Brwn and Rfs-sided Towhee, Blck-headed Grsbk, Plain Titmouse, California Thrshr, Wren-tit, Bl-gry Gnatcatcher.

RAPTORS NOTED: Prairie Falcon, Red-tail Hawk, Cooper's Hawk, Golden Eagle (3 sub-adults and an adult), Kestral, Turkey Vulture.

FEEDING HABITAT AVAILABILITY AND QUALITY: Good diversity of habitat. Coniferous forest on upper north slope, mixed coniferous and live and deciduous oak on lower north slope. Understory little or lacking on upper slope becoming denser at lower elevation. South slopes mostly chaparral type vegetation mixed with stands of conifers on upper slopes. Savannah-oak woodland dominates the slopes below an east-west running ridge opposite and north of St. John Mtn., below cliff site. Riparian habitat along streams and tributaries.

SITE RELATION TO WATER: Cliffsite faces out over the North Fork Stony Creek drainage. Entire region is laced with networks of perrenial and

seasonal tributaries. At present an active streamlette flows through ravine on cliff's west side.

DISTURBANCE POTENTIALS: Entire region laced with access/recreational improved dirt roads along ridges and hillsides. Region used for off-road recreational vehicles, hunting, camping and hiking. However, disturbance potential is rated as low owing to steep, loose terrain without any access road (other than road to mountaintop) or maintained foot trails in vicinity of Mt. St. John.

FACTORS FOR PEREGRINE ESTABLISHMENT: Diversity of habitat and presence of year round stream and river which supports varied prey base. Large cliff with west and north exposure (other cliff's higher on slope nearer summit are not as large and are not felt to be suitable). Diverse topography provides optimal conditions for both breeding and wintering peregrines. The river valley below provides open protected situation for wintering prey and peregrines. This is a historical peregrine site.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Potential (though relatively remote) disturbance by hikers. Lack of suitable ledges. Climate (extremes of early summer heat may be a factor). Shhoting (remote). Prairie falcons currently resident at the site.

MANAGEMENT RECOMMENDATIONS: During nesting season close to access to unauthorized vehicles. Check yearly for occupation. Maintain Mt. St. John in current relatively roadless, undisturbed state.

DIRECTIONS TO THE SITE: Lodoga or Willows to Stonyfork Ranger Station/ Work Center. West on F.S. road #18N01 to Fouts Campground, north from Fouts on F.S. #18N03 to #18N06 to Mt. St. John summit. From radio station proceed west on Summit ridge for approx. $\frac{1}{4}$ mile then down series of game trails for half mile. The main cliff is part of a series of outcroppings cresting a ridge that originates near summit and trends north. A parallel ridge allows excellent view of west face at same level.

ENHANCEMENT POTENTIAL: Potential sites exist for creation of artificial platforms or ledges in existing rock depressions, overhangs, crevasses.

CONCLUDING COMMENTS: The site is active for prairie falcons in 1979. Adult pair confirmed during ground check 5/24. Eyrie is a ledge pothole near top left of rock viewed from west (see drawing). Young not confirmed. Adult female observed in defense attack against golden eagle 5/24.

GROUND RESULTS

SITE NAME Copper Butte

SITE NUMBER 8

		Dates Visited
Forest Name	Mendocino	
Aerial Photo #	N/A	4/7/79
Aerial Photo Rating	N/A	5/25/79
Quadrangle	Lake Pillsbury	
Legal Descrip.	T18N,R9W,S11&12	
Elevation	3000	
Cliff Height	150-200' (44-59m)	
Cliff Aspect	NW	
Final Classification	Possible	

PREY NOTED: Common Flicker, Dark-eyed Junco, Downy and Hairy Woodpecker, Stellars Jay, California Thrasher, Western Tanager, Robin, Cowbird, Rufous-sided Towhee, Purple Finch, Lesser Goldfinch, Black-headed Grosbeak, Olive-sided Flycatcher, Western Flycatcher, Western Wood Peewee, Yellow and Black-throated Gray Warbler, Yellow-breasted Chat, Ash-throated Flycatcher. Raptors: Kestral, adult and sub-adult Golden Eagle.

FEEDING HABITAT AVAILABILITY AND QUALITY: North slopes largely conifers with some mixing of oaks. South-facing slopes dominated by chaparral scrub (with mahogany, manzanita, Live Oak); denseness variable but mostly thick. Understory in coniferous forest variable. Riparian habitat existing along river (maples, willow).

SITES RELATION TO WATER: Region has abundant tributaries feeding into the Eel River in main canyon below. Copper Butte Creek originates up-canyon from the cliff and flows below to join Eel. Site is close to abundant water.

DISTURBANCE POTENTIALS: Area is used for recreation (off-road vehicles, camping, fishing, hunting) and is accessible by many good roads.

FACTORS FOR PEREGRINE ESTABLISHMENT: Extensive networks of tributaries feeding into the Upper Eel, which feeds into Lake Pillsbury, drain off diverse topography of canyons, ridges, mountains and valleys. Good diversity of habitat well within sight of Copper Buttes provides optimum prey diversity and abundance. Lake Pillsbury provides a potential wintering area for prey and peregrines. Wind conditions good for flying. See directions for rock description.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: No observable evidence of recent raptor activity. No suitable ledges observed. Potential for human disturbance.

MANAGEMENT RECOMMENDATIONS: Low management priority due to n.w. aspect.

DIRECTIONS TO THE SITE: Clear Lake (Upper Lake) to Lake Pillsbury via F.S. Road #1N20. Turn east onto 18N01 near Howard Mill Station, toward Bear Creek Station. Turn north onto 18N04 1 mile west of Bear Creek Station. 18N04 goes to Copper Buttes and Lower Nye Campground. Site is a series of receding rock exposures on northwest slope. Of 4 fairly vertical rock exposures, 1 is located in upper right quarter, remaining three on lower right quarter, one face low in canyon.

ENHANCEMENT POTENTIAL: There are a few potential sites for creation of artificial ledges. Advantage could be taken of already existing clefts and shallow depressions for enlarging and shaping, or use of artificial materials. Locations described in directions.

M-31

GROUND RESULTS

SITE NAME Upper Eel River

SITE NUMBER 10

		Dates Visited
Forest Name	Mendocino	
Aerial Photo #	N/A	5/31/79
Aerial Photo Rating	N/A	6/1/79
Quadrangle	Hull Mountain	
Legal Descrip.	T20N,R9W,S20&29	
Elevation	3200-5000	
Cliff Height	Graves Cb:350-400'(105-118m); Panther Rk:100'(30m)	
Cliff Aspect	Graves Cb: SW; Panther Rk: W	
Final Classification	Potential	

PREY NOTED: Dark-eyed Junco, Black-headed Grsbeak, Mnt Chikadee, Red-breasted Nuthatch, Mtn and Valley Quail, Western Flycatcher, Warbling and Hutton's and Solitary Vireo, Black-throated grey and Yellow-rumped and Nashville and Hermit Warbler, Stellars and Scrub Jay, Western Tanager, Chipping Sparrow, Lark Sparrow, Rufous-sided Towhee, Pileated and Acorn and Hairy Woodpecker, Lazuli Bunting, Robin, Lesser Goldfinch, Pine Siskin, Western Wood Peewee, Common Flicker, Red-breasted sapsucker, Bushtit, Violet-green and Rough-winged and Cliff Swallow.

RAPTORS NOTED: 2 adult Golden Eagles (one landed in pine tree on ridge summit above Graves Cabin Cliffs), Cooper's Hawk male, Turkey Vulture.

FEEDING HABITAT AVAILABILITY AND QUALITY: Evergreen oak-pine woodland (with manzanita dominant shrub) on south-facing slopes and well drained slopes. Denser mixed conifers and oaks (both live and deciduous) on north-facing slopes and in ravines and canyons. Considerable logging has provided for succession stage habitats. Lower elevations are meadows and savannah-oak woodland with oak-scrub dominating south-facing slopes.

SITES RELATION TO WATER: Sites checked are on slopes above Eel River and tributaries.

DISTURBANCE POTENTIALS: Potential disturbance by hunting and hikers. There are good access roads along ridges and many logging roads. Panther rock has an access road come within 300 yards on opposite ridge.

FACTORS FOR PEREGRINE ESTABLISHMENT: Availability of diverse habitats with abundant prey and activity (most noted along water courses and damp meadows in association with riparian habitat). Winds along ridges and updrafts from canyons and ravines provide for optimum flying/soaring conditions. Possible presence of suitable nest ledges (though not confirmed).

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Potential disturbance by humans during various recreational uses of surrounding forest and access roads. Little or no evidence of recent use by falcons on cliffs observed. No ledges were observed that would provide optimum nesting conditions.

MANAGEMENT RECOMMENDATIONS: If peregrine establishment should occur, close roads in vicinity to access during breeding season.

DIRECTIONS TO THE SITE: Upper Eel River drainage access is gained from north end of Lake Pillsbury. Cliff #1 (Graves Cabin/Tar Flat Station) - from Lake Pillsbury , north on M6 towards Tar Flat Station. Take Graves Cabin turnoff and drive to cabin site. Walk due west up hill to ridge then follow ridge due south and east to view of cliff and other exposures lower down in canyon. Cliff #2 (Panther rock) - #M6 from Lake Pillsbury to F.S. #20N16. Follow 20N16 until opposite cliffs are in view.

ENHANCEMENT POTENTIAL: Of the two cliffs best observed, there are potential areas where modification or construction would provide suitable nest sites.

CONCLUDING COMMENTS: Cliffs best observed on ground check were different from those inspected from helicoptor, but in the same vicinity. This is a possible golden eagle nesting territory (see Raptors Noted).

GROUND RESULTS

SITE NAME Twin Rocks

SITE NUMBER 15

		Dates Visited
Forest Name	Mendocino	
Aerial Photo #	N/A	4/30/79
Aerial Photo Rating	N/A	
Quadrangle	Anthony Peak	
Legal Descrip.	T23N.R10W.S33	
Elevation	1500	
Cliff Height	250' & 100' (74m & 30m)	
Cliff Aspect	N and SW	
Final Classification	Possible	

PREY NOTED: Robin, Blue Grouse, Black-headed Grosbeak, Western Tanager, Scrub Jay, Acorn Woodpecker, Western Meadowlark, Mtn Quail, Brewers Blackbird, Tree Swallow, Cliff Swallow, Western Bluebird, Yellow-rumped Warbler, Lark Sparrow, Common Flicker, Stellars Jay.

RAPTORS NOTED: Kestral

FEEDING HABITAT AVAILABILITY AND QUALITY: Although prey species were scarce in the immediate vicinity during ground check, the habitat is varied and should be productive. Oak woodland and open meadows around the cliffs, mixed hardwood-coniferous forest up slope. The Eel River drainage is easily accessible for foraging.

SITES RELATION TO WATER: Jumpoff Creek flows from East to West between the two rocks and empties into Black Butte River two miles east, which empties into the Middle Fork of the Eel River to the northwest five miles.

DISTURBANCE POTENTIALS: During ground check heavy machinery was in use doing road work less than a mile to the east and above the rocks. The area is currently being used to graze cattle: there is no marketable timber in the immediate vicinity. Disturbance potentials are for the most part low.

FACTORS FOR PEREGRINE ESTABLISHMENT: Site is historical for falcons;prairies nested here in 1978 (Boyce). Little disturbance may be expected upon completion of roadwork. Good foraging habitat. Rocks are down in Jumpoff Creek valley but extremely dominant on the landscape. South rock is large, 250 ft. in height, good vertical expanse with ledges. North rock is much smaller, about 100 feet in height, with s.w. aspect.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: The best cliff (south rock) is north-facing. Use of heavy machinery may have discouraged establishment of a territory this season.

MANAGEMENT RECOMMENDATIONS: The site should be checked yearly for occupation. Avoid heavy machinery use during the breeding cycle on surrounding roads, especially if falcon establishment occurs. Permit no additional roads to penetrate the Jumpoff Creek drainage east of Shake Cabin Flat. Consider ledge enhancement to induce peregrine nesting.

DIRECTIONS TO THE SITE: From Covelo proceed east on St. Rt. 162 and then FH7 to Eel River Work Station. Follow signs to Mendocino Pass about 7 miles. Cliffs are seen easily from the road.

ENHANCEMENT POTENTIAL: This is one of the best sites in the Covelo District. Installation of a large ledge made for peregrines should be considered.

CONCLUDING COMMENTS: Site was active for prairie falcons in 1978 with at least one young (Boyce), inactive in 1979. Falcons nested on south rock north face last year, the most dominant, which may indicate that the north aspect is sufficiently compensated by low elevation and its low position in the valley to permit peregrine establishment.

GROUND RESULTS

SITE NAME The Gorge

SITE NUMBER 16

		Dates Visited
Forest Name	Mendocino	
Aerial Photo #	N/A	7/15/79
Aerial Photo Rating	N/A	7/16/79
Quadrangle	Paskenta	
Legal Descrip.	T23N,R7W,S16&17	
Elevation	1600	
Cliff Height	200' (59m)	
Cliff Aspect	S,SE,SW	
Final Classification	Possible	

CONCLUDING COMMENTS: The site was active for prairie falcons in 1978 (Boyce); nest cliff was the first rock mass on the east side north slope, eyrie in center about mid-cliff height. However, no falcons were observed from helicoptor 4/7, and two attempts to reach the site for ground check failed due to locked gate. The site lies right on the forest boundary and all access roads are on private land. No landowners could be located to permit passage. The land has recently changed hands and the owners and locked gate are new.

GROUND RESULTS

SITE NAME Middle Fork Eel River/Bar Creek

SITE NUMBER 17

		Dates Visited
Forest Name	Mendocino	
Aerial Photo #	N/A	5/2/79
Aerial Photo Rating	N/A	5/29-30/79
Quadrangle	Covelo	
Legal Descrip.	T23N,R11W,S14/15	
Elevation	2450	
Cliff Height	east rock: 300-400' (88-118m)	
Cliff Aspect	east rock: SW; west rock: E and NE	
Final Classification	Historical/Possible	

PREY NOTED: For entire drainage from Eel River Sta to Foster Ranch, from river to upper conifer forests: Twnsnd's Sltr, Orgn Jnco, Shrp-shnd Hwk, Bk-hded Grsbk , Mnt Chkdee, Rd-brstd Nthtch, Brn Crpr, Mnt Quail, Valley Quail, Wstrn flycthr, Wrbling,Htns, and Sltry Vireos, Blk-thrtd gry, Nshvl, Adbns, Hermit Warblers, Yellow-brstd Chat, Stlrs and Scrub Jays, C. Crow, Cowbird, Blk, Vaux's and Wht-thrtd Swifts, Wstrn Tngr, Chpng and Lark Sparrows, Rfs-sdd Twhe, Brn Twhee, Pltd, Acorn, Hry, and Lewis Wdpkrs, Lzli Bntng, A Robin, Lsr Goldfinch, Evnng Grsbk, Pn Sskn, Wstrn Wdpewee, Anna's and Calliope Hmngbrds, Bnd-tail Pgn. (abundant), Mrnng Dv, C Flcks, Rd-Brstd Spskr, Cmn, Bwcks and Hse Wrens, Bsh-tit, Vlt-grn, Rh-wng Swlws, Wstrn Kngbrd, Wood duck, Mallard, Bullocks Oriole, Rd-wng Blkbrd.

RAPTORS NOTED: Golden Eagle in vicinity, Sharp-shin Hawk.

FEEDING HABITAT AVAILABILITY AND QUALITY: Habitat is a diverse mixture of coniferous forest, conifer-oak woodland, oak-savannah woodland, open grassland, chaparral, and riparian. Density and composition dependent on soil drainage and slope orientation. In general an understory is slight or lacking in conifer, conifer oak woodland. Understory not heavy enough to impede walking, even in oak woodland, with the exception of riparian. Band-tailed pigeons are very numerous, several to many flushing from madrone trees during ground check.

SITES RELATION TO WATER: The Middle Fork of the Eel River flows right between the two Bar Creek Cliffs. Several small streams empty into the Eel very near the site.

DISTURBANCE POTENTIALS: High. A logging road from 1N02 runs close to cliffs and trails give access to top of east cliff: many shotgun shells found in immediate vicinity. Smaller cliff on opposite bank has lower disturbance potential, possibly from fishermen. The local landowner wants to put in a road and build a house very near the cliff on the east side of the river.

FACTORS FOR PEREGRINE ESTABLISHMENT: Abundance of suitable habitat and prey species. Habitat is diverse, providing optimum prey availability and diversity. Canyons and ridges of diverse topography provide channeled winds and updrafts. East cliff is large (3-400' in height), s.w. aspect, composed of old broken igneous rock. West cliff smaller, east to n.e. aspect. Possible nest sites observed but nothing considered ideal. Historic site.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: No evidence of recent raptor activity on cliffs. Lack of suitable ledges. High potential for human disturbance, especially at east (most suitable) cliff.

MANAGEMENT RECOMMENDATIONS: Consult landowner about building plans and try to gain cooperation to minimize disturbance. If building plans go through avoid use of heavy machinery during breeding season. Avoid shooting in vicinity of cliffs for same period, and restrict traffic on access road. Site should be checked each year for occupation. Site could be considered for ledge enhancement.

DIRECTIONS TO THE SITE: East from Covelo via Rt. 261 and FH7 to Eel River Work Station. North on 1N02/M1 about 3 miles. Turn left at sign that says "Private Property, Children at Play". Follow to the end, ask owners permission, then hike down Bar Creek to the cliffs.

CONCLUDING COMMENTS: E.O. Wenzel reports this as a historic site; a pair of peregrines and three young observed in 1975.

GROUND RESULTS

SITE NAME Hell Hole Canyon

SITE NUMBER 18

		Dates Visited
Forest Name	Mendocino	
Aerial Photo #	N/A	5/2/79
Aerial Photo Rating	N/A	5/27/79
Quadrangle	Covelo	
Legal Descrip.	T23N,R11W,S1	
Elevation	2300	
Cliff Height	100-150' (30-44m)	
Cliff Aspect	S	
Final Classification	Possible	

PREY NOTED: Twnsnd's Sltr, Orgn Jnco, Blk-hdd Grsbk, Mnt Chkdee, Rd-brstd Nthtch, Brn Crpr, Mnt Quail, Vly Quail, Wstrn Flctchr, Wrblng Vireo, Blk-thrtd gry Wrblr, Adbns Wrblr, Stelrs Jay, Scrb Jay, Cowbird, Nshvl Wrblr, Blk Swft, Wht-thrtd Swft, Wstrn Tngr, Chpng Sprw, Rs-sdd Twhee, Pltd Wdpkr, Lzli Bntng, Rbn, Lsr Gldfnch, Wstrn Wd Peewee, Anna's Hmngbrd, Bnd-tld Pgn, Hry Wdpkr, C Flkr, Rd-brstd Spskr, Cassin's Fnch, Pine Siskin, Lrk Sprw.

RAPTORS NOTED: Golden Eagle, Goshawk, Shrp-shnd Hawk, Red-tail Hawk, Kestral.

FEEDING HABITAT AVAILABILITY AND QUALITY: Region densely vegetated with conifers and oaks (mostly deciduous, some live oak depending on slope and drainage). Near the river the dominant habitat type is deciduous oak-savannah woodland. As altitude increases stands of conifers (douglas fir, red fir, pines) occur more commonly. Region is a mozaic of conifer/oak woodlands. Oaks dominate at lower altitudes and south-facing slopes, conifers higher altitudes and north slopes.

SITE RELATION TO WATER: Cliff is on east side of Middle Fork Eel River approx. 1 mile distant and high above river. The region is a network of perennial and seasonal tributaries of the Eel. Also, a natural lake (Howard) is approx. 1 mile distant.

DISTURBANCE POTENTIALS: Region has a history of intense recreational use: hunting, camping, hiking, recreational vehicles. Good light duty roads allow basic penetration of the region, but exploration of vicinity disclosed little or no evidence of human disturbance. Indiscriminant shooting, occassional hikers, and off-road vehicle use pose the potential threat.

FACTORS FOR PEREGRINE ESTABLISHMENT: Good habitat and forage. Site is remote and rugged in nature. Prey species abundant, frequently seen flying out high from cover. Middle Fork Eel River drainage has good

diversity of topography and habitat, providing good diversity of prey base. Much activity was noted throughout ground observation. Peregrine sighting in the area 4/26, reported by Lynn Murray (USFS).

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Investigation of available nest cliff produced no totally suitable nest sites. The rock exposures are of sedimentary nature (shaley, crumbly and receding with few vertical faces or overhangs. Resident Golden Eagles.

MANAGEMENT RECOMMENDATIONS: The site could be considered for nest enhancement. Check the site yearly for raptor activity. If peregrine establishment occurs maintain current roadlessness in Hell Hole Canyon, close the area by posting to ORV use.

DIRECTIONS TO THE SITE: From Rt. 101 take R. 261 east to Covelo and then Eel River F.S. Station. Turn due north on F.S. road # M1/1N02 (to Indian Dick, Doe Campground, Howard Lake). Stop at Baldy Ridge. Hike ridge to west. Ridge will turn due north, follow and look for cliffs below on left.

ENHANCEMENT POTENTIAL: Advantage could be taken of available overhangs and clifts for placement of artificial sites, particularly a series of exposures oriented to south on the east-west running ridge on north side of Hell Hole Canyon. Here exist horizontal clefts and overhangs which could be modified.

CONCLUDING COMMENTS: Site is active for golden eagles in 1979. An adult and immature eagle was observed in vicinity of cliffs on 5/2. Adult female confirmed 5/27 entering and leaving a large stick nest in fir tree at base of cliffs on north-facing slope (nest only partially visible from vantage point during ground check); another golden eagle heard vocalizing from vicinity of eyrie. Young not confirmed. A blue and white helicoptor was observed 5/2 flying down the canyon 200 feet above the water.

GROUND RESULTS

SITE NAME Foster Ranch

SITE NUMBER 19

		Dates Visited
Forest Name	Mendocino	
Aerial Photo #	N/A	5/27-28/79
Aerial Photo Rating	N/A	
Quadrangle	Covelo	
Legal Descrip.	See Directions	
Elevation	3000	
Cliff Height	various	
Cliff Aspect	best cliff: S & W	
Final Classification	Possible	

PREY NOTED: Twnsnd's Sltr, Orgn Jnco, Blk-hdd Grsbk, Mnt Chkdee, Rd-brstd Nthtch, Brn Crpr, Mnt Quail, Wstrn Flctchr, Wrblng & Sltry Vireos, Blk-

thrtd gry, Hrmt, Adbns, Nshvl Wrblers, Stlrs Jay, Scrub Jay, Cowbird Blk, Vaux's, Wht-thrtd Swifts, Wstrn Tngr, Chpng Sprw, Rfs-sdd Twhee, Pltd & Hry Wdpkr, Lzli Bntng, Rbn, Lsr Gldfnch, Cassin's Fnch, Pine Sskn, Wstrn Wd Peewee, Anna's Hummingbird, Bnd-tld Pgn. C Flckr, Rd-brstd Spskr, Lark Sprw, Cnyn Wrn, Bwcks Wrn, Bush-tit, Vlt-grn Swlw, Rgh-wngd Swlw.

FEEDING HABITAT AVAILABILITY AND QUALITY: Conifers dominant on high altitude zones giving way to oak dominant habitat in lower zones. Composition and density of vegetation variable dpending on slope orientation, substrate and drainage, but often dense with light understory. Low altitude oak-savannah woodland generally more diverse in flora and fauna. Both deciduous and evergreen (live) oaks present, deciduous dominant at lower zones.

SITE RELATION TO WATER: Site is immediately adjacent to the Middle Fork of the Eel River. Numerous tributaries run close to the rocks and enter the Eel: Hammerhorn Creek, Beaver Creek, Pothole Creek, Howard Creek.

DISTURBANCE POTENTIALS: The region is subject to recreational use: hunting, camping, hiking, ORV use. F.S. road #M1/1N02 runs close below Foster Ranch rock; it is a main interconnecting road to several recreation areas and subject to heavy use; Foster Ranch rock is on private land parcel; possible access and disturbance by fishermen and hunters. 2nd rock (small outcropping on west bank of Eel) and third rock (also on the Eel) are farther from road and have lower disturbance potential. 4th rock (large cliff face on low mountain peak above road) and 5th rock (series of eroded receding exposures on higher slope above Hammerhorn Lake) also have lower disturbance potential due to verticle protection from road. Future logging in the area, if it occurs during breeding, could conflict with establishing peregrines.

FACTORS FOR PEREGRINE ESTABLISHMENT: Abundance of suitable habitat and prey species. Excellent relation to water. 4th rock has large cliff face with south and west aspect and possible ledges, good effective height. Foster Ranch rock is also large and has possible ledges. 2nd rock has east aspect.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: No evidence of recent raptor activity noted on cliffs. No positive suitable ledges noted. Possibility of human disturbance, particularly during summer months and as early as May.

MANAGEMENT RECOMMENDATIONS: Check area yearly for peregrine activity. If occupation or establishment occur, take necessary steps to minimize disturbance. The site should be considered for enhancement.

DIRECTIONS TO THE SITE: From Covelo Rt. 261 and FH7 to Eel River Work Station and turn north along Eel River on F.S. #M1/1N02 (road closed due to slide at Howard Lake in 1979: if so take detour around Anthony Peak to Hammerhorn Lake). Foster Ranch rock (T24N,R10W,Sec 7): n. on 1N02 to Foster Ranch turnoff, walk down toward river to view of rock. 2nd rock (T24N, R10W, Sec 18): n. on 1N02, approx. ½ mile n. Beaver Glade Station look westward. 3rd rock (T24N, R10W, Sec 30): n. on 1N02 to Howard Lake, take F.S. #23N37 toward Pacific Coast Ranch/Travelers Home trails, walk toward river by ridges toward confluence of Eel River and Howard Creek. 4th and 5th rocks are easily visible just past Hammerhorn Lake turnoff.

ENHANCEMENT POTENTIAL: Cliff #4 above road appears to be of sedimentary rock with near horizontal orientation of strata. There are many overhangs for possible creation of new or modification of existing ledges.

GROUND RESULTS

SITE NAME Rattlesnake Creek and Asa Bea Crossing

SITE NUMBER 20 & 21

		Dates Visited
Forest Name	Mendocino	4/7/79
Aerial Photo #	N/A	5/15/79
Aerial Photo Rating	N/A	
Quadrangle	Covelo	
Legal Descrip.	T25N,R11W,S35&28	
Elevation	3300	
Cliff Height	125'/150' (37m/44m)	
Cliff Aspect	E & N/E & N	
Final Classification	Possible/Potential	

PREY NOTED: Starling, Dipper, Violet-green Swallow, Rough-winged Swallow, Rufous-sided Towhee, Scrub Jay, Common Flicker, Robin, Green-tailed Towhee, Killdeer, Stellar Jay, Brewers Blackbird, Duck sp., California quail.

RAPTORS NOTED: Kestral, Turkey Vulture, Common Raven

FEEDING HABITAT AVAILABILITY AND QUALITY: Excellent. Diverse habitat and abundant prey. Good riparian habitat along the M.F. Eel and Rattlesnake Creek. Ridgetops are variably brushy, bare soil, and timber. Much mature timber on ridge due south. To the west some timber and deciduous/scrub mix. To the north light timber, open space and deciduous. Much grassy meadow in the vicinity, also standing water - sinkholes and lake.

SITE RELATION TO WATER: The rocks are located adjacent to the middle Fork of the Eel river which flows at their base. Rattlesnake Creek enters the Eel opposite site #20. Stick Lake Canyon and Line Gulch near Site #21.

DISTURBANCE POTENTIALS: Moderate from hikers. A jeep trail (4WD) $\frac{1}{2}$ mile long goes to within $\frac{1}{2}$ mile of Rattlesnake Creek rock and the Eel shows sign of swimmer use close-by. Many trails are located within a mile of Asa Bea rock. A major F.S. road (1N02/M1) passes within 1 mile n.w. of the site, very close to its end but it provides access to many trails to Yolla Bolly Middle Eel Wilderness. The sites are very accessible by foot. Logging of available timber could be a future disturbance factor.

FACTORS FOR PEREGRINE ESTABLISHMENT: Good habitat diversity and prey base. Adjacent to a major river. Rattlesnake Creek Rock is 100-125ft. in height, east aspect (as well as north), has overhang. Asa Bea Rock is 150 ft. in height, east aspect (as well as north), has good vertical faces with overhang and possible whitewash.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Both rocks are situated low right next to the river, lacking effective height and dominance on the landscape. No suitable ledges noted on either rock. Half north aspect on both rocks. Little visible evidence of raptor use.

MANAGEMENT RECOMMENDATIONS: Check Asa Bea rock periodically for sign of raptor activity. This rock could be considered for enhancement (see Enhancement Potentials). Limit logging in the area, both for the high esthetic value of the Middle Eel and to maintain its water quality, and to avoid discouraging peregrine use. If the site should become occupied minimize human awareness: close trail #11W05 and its spurs to road 1N02 from early March to mid June.

DIRECTIONS TO THE SITE: From Covelo take Hwy 261 to FH7 to Eel River Station and turn north onto F.S. road #1N02/M1 (check first for accessibility; this

road was closed by slide at Howard Lake this Spring.) Follow to just past Rattlesnake Creek crossing and walk down jeep trail 3/4 mile to Rattlesnake Creek rocks. Continue north on 1N02 approx. 1½ mile past next trailhead on left to narrow turnout on left. There hike down trail 1.5 miles to Asa Bea rock. If 1N02 is closed take detour around Anthony Peak and Buck Rock.

ENHANCEMENT POTENTIAL: The rocks are very sheer and smooth with overhang but without apparent ledges. An artificial structure might be fashioned with a strong steel plate and a ledge attached at a right angle to it, and then bolted against the smooth rock through the steel plate. However low effective height makes the site low priority for enhancement.

GROUND RESULTS

SITE NAME Thomas Pocket Ridge (Hammerhorn)

SITE NUMBER 22

		Dates Visited
Forest Name	Mendocino	
Aerial Photo #	N/A	6/22/79
Aerial Photo Rating	N/A	
Quadrangle	Yolla Bolly	
Legal Descrip.	T25N,R9W,S21	
Elevation	4600	
Cliff Height	200-250' (59-74m)	
Cliff Aspect	S and E	
Final Classification	Potential	

PREY NOTED: California Quail, Dipper, Stellars Jay, Western Tanager, Hermit Warbler

RAPTORS NOTED: None.

FEEDING HABITAT AVAILABILITY AND QUALITY: Thin riparian habitat along Alder Creek: oaks, grasses, shrubs mixed with timber. Mixed coniferous forest along slopes of Alder Creek drainage with patches of brush and bare soil: dense timber at base of S. Yolla Bolly Mtns, open areas of scree at summit. Subjectively, habitat in immediate vicinity is not particularly diverse or prey species abundant. Ecotones marginally present. There are a number of rock masses in the drainage which provide hunting and lookout perches. Prey abundance may increase farther down Thomas Creek drainage.

SITE RELATION TO WATER: The site lies adjacent to and overlooking Alder Creek which drains the South Yolla Bolly Mtns. Over Thomas Pocket Ridge 1 mile west are the headwaters of Thomas Creek drainage; Thomas Creek passes 1 mile south at confluence with Alder Creek. Fish Creek drainage 4 miles S.E.

DISTURBANCE POTENTIALS: None apparent in the immediate vicinity. Future logging in the area could be a disturbance factor.

FACTORS FOR PEREGRINE ESTABLISHMENT: Cliffs have suitable vertical height (200-250 ft) with aspects south and east. The rock does not have great vertical height but has adequate view of Alder Creek drainage.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: The site is a series of several spires like vertebrate running west on Thomas Pocket Ridge. The easternmost is the largest and plunges to Alder Creek. Rock is composed of thin bands of sedimentary strata deformed into a vertical configuration, which is poor for horizontal ledge development. There are no adequate ledges apparent on the cliffs or sign of recent raptor activity. Rock is very decayed and loose. Another rock ½ mile farther up Alder Creek on east side with west aspect is

probably too small for peregrine nesting.

MANAGEMENT RECOMMENDATIONS: Check the site periodically for sign of raptor use. Low suitability for peregrine nesting makes this a low priority site for management.

DIRECTIONS TO THE SITE: From Red Bluff take Walnut Street west to flashing yellow light, left, then right on Live Oak Rd. Take first left on Red Bank Rd. past "Fancy Feather Farm" to Y intersection and take left fork. Continue straight to Raglin Ridge Rd. (F.S. #25N50) and turn left . Follow to Toomes Campground, take 25N11 to 25N01/M22 and turn left. At Cold Springs Station turn right onto #23N01/M2 and follow past Johnson Cabin to Thomas Creek bridge. Park and hike up Thomas and Alder Creek 1 mile to view of cliffs.

ENHANCEMENT POTENTIAL: The rock is probably too decayed to secure an artificial structure and no vertical cracks are present for placement. Vertical orientation of strata make ledge enhancement unfeasible. Potholes may possibly be creative with explosives but this is a low priority site for enhancement.

GROUND RESULTS

SITE NAME North Fork Elder Creek

SITE NUMBER 23

		Dates visited
Forest Name	Mendocino	
Aerial Photo #	N/A	4/7/79
Aerial Photo Rating	N/A	6/3/79
Quadrangle	Colyear Springs	
Legal Descrip.	T25N,R8W,S13	
Elevation	3900	
Cliff Height	100-250' (30-74m)	
Cliff Aspect	S & N	
Final Classification	Highly Suspected	

PREY NOTED: All birds seen between Cedar Springs/Lowry Rd. and Bear Wallow Spring: Cssns Fnch, Mnt Chkdee, Wstrn Wd Peewee, Olv-sdd Flctchr, Hmmnds & Wstrn Flctchr, Ash-thrtd Flctchr, Rd-brst Nthtch, Wstrn Tngr, Twnsnds Sltr, Wht-hdd & Acrn Wdpckr, Cmn Flckr, Pltd Wdpckr, Band-tld Pgn, Mrnng Dv, Blk-hdd Grsbk, Pine Sskn, Lsr Gldfnch, Lwrncs Gldfnch, Orgn Jnco, Chpng & Fox Sprw, Stlrs Jay, Rd-brst Spsckr, Httns & Sltry Vireo, Bush-tit, Wrn-tit, Blleks Oriole, Wstrn Kngbrd, Wstrn Blbrd.

RAPTORS NOTED: Golden Eagle, Turkey Vulture, Red-tailed Hawk, Raven.

FEEDING HABITAT AVAILABILITY AND QUALITY: Diverse habitat ranging from montane - pine, fir, cedar, live oak woodland at higher elevations, north slopes, ravines and canyon bottoms, to pine-oak woodland and mixed oak-chaparral scrub at lower elevations, south-facing slopes, well-drained slopes. Oak-savannah woodland dominates the low hill co country and valleys. Vegetation often dense, extensive logged areas vegetated in dense stands of manzanita and young conifers.

SITE RELATION TO WATER: Elder Creek drainage cuts through bottom of gorge where cliffs originate. Many small creeks drain off Elder ridge.

DISTURBANCE POTENTIALS: Human disturbance at cliff sites expected to be low owing to very rugged nature, steep slopes, dense vegetation, and lack of roads or trails running close to the rock. There are roads at top of Raglin and Valentine Ridges on either side of site, but to get close to cliffs involves 4-5 mile walk up Elder Creek from F.S. road #25N50. The general area is subject to recreational use: hunting, fishing, hiking, recreational vehicle use. Past logging in the area, and the existence of marketable timber and much private land in the vicinity indicate that logging poses potential disturbance.

FACTORS FOR PEREGRINE ESTABLISHMENT: Good diversity of habitat with abundant prey species observed, mostly at lower elevations. Steep canyon country and mountains provide for good wind and thermal conditions. Cliffs in a narrow gorge on sizeable river. May have suitable or potential nest sites.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Human activity in surrounding area may be only real threat.

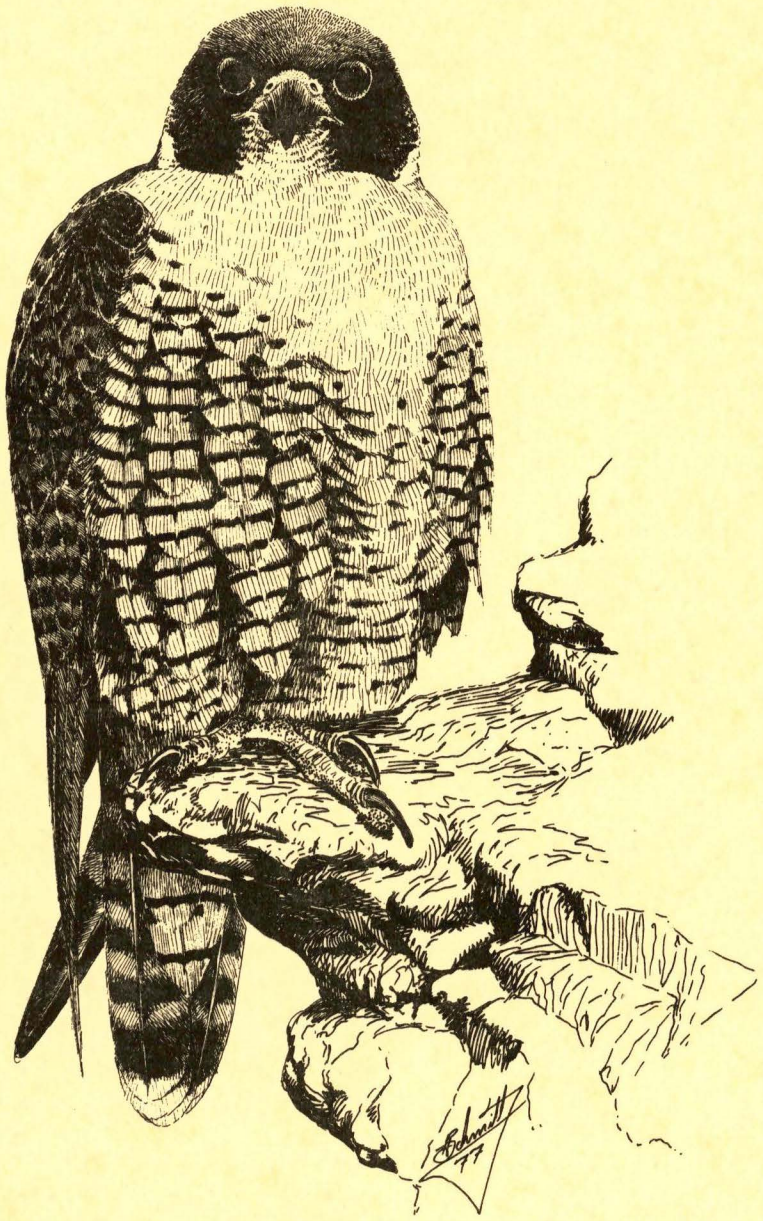
MANAGEMENT RECOMMENDATIONS: Site should be checked each year for occupation. Consider a study of present and expected recreational and timber harvest use of the area. Site borders F.S. and private land so consider a land exchange with private owners to acquire potential peregrine nesting and foraging habitat.

DIRECTIONS TO THE SITE: From Red Bluff drive west on Cedar Springs Rd to F.S. road #25N01. Turn left at Raglin Ridge Road (#25N50) which will cross Elder Creek, then up the ridge on often steep dirt road. Take Bear Wallow Spring turnoff and before Bear Wallow Spring turn north and down hill on dirt road for $\frac{1}{2}$ mile. A set of rock outcroppings permit view down into drainage and distant view of gorge and cliffs. From 25N50/Elder Creek crossing hike up creek for close look.

CONCLUDING COMMENTS: Cliffs not examined closely for enhancement potential, ledges, and whitewash during ground check due to extreme difficulty of access.

APPENDIX B

A PEREGRINE FALCON NESTING HABITAT SURVEY IN THE SIX RIVERS NATIONAL FOREST - 1979



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HELICOPTER RESULTS

SITE NAME: RED MOUNTAIN CREEK

SITE NUMBER: 27

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 1435

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 89-115 m (300-400 ft)

TOTAL SCORE: 3.75

CLIFF SCORE: 2.0

LEDGE SCORE: 1.75

GROUND VISIT: Yes

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x		x		
Ledge Quality		x		x		
Ledge Location						
Enhancement Potential				x		
Human Disturbance					x	
Overall Impression		x				

COMMENTS:

-Huge cliff

-Whitewash down below, no ledge

-Not at all vertical,possibly a good cliff

-Enhancement Potential meager, no cracks

-One ledge

HELICOPTER RESULTS

SITE NAME: N. FORK EEL RIVER/DUNCAN RANCH

SITE NUMBER: 28

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 1438

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 89-115 m (300-400 ft)

TOTAL SCORE: 4.0

CLIFF SCORE: 2.0

LEDGE SCORE: 2.0

GROUND VISIT: Yes

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x				
Ledge Quality		x				
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression		x			x	

COMMENTS:

-West and south facing slope; east side covered with vegetation

-Faces river

-Lots of vertical rock; nice overhang

HELICOPTER RESULTS

SITE NAME: NORTH FORK EEL RIVER/LIGHTFOOT CREEK

SITE NUMBER: 29

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 1440

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 115 m (300 ft)

TOTAL SCORE: 6.0

CLIFF SCORE: 3.0

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Possible/Highly Suspect.

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			
Ledge Quality			x			
Ledge Location			x			
Enhancement Potential			x			
Human Disturbance			x			
Overall Impression			x			

COMMENTS:

-Two big rocks-pinnacle

-Nice whitewash, could be used by vulture or eagle

-Very nice ledge with whitewash

HELICOPTER RESULTS

SITE NAME: N. FORK EEL RIVER/ROCK CREEK

SITE NUMBER: 30

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 1443

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: Amer. Kestral

CLIFF HEIGHT: 147 m (500 ft)

TOTAL SCORE: 6.0

CLIFF SCORE: 3.0

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Highly Suspected

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality			x		x	x
Ledge Location			x	x	x	x
Enhancement Potential			x			x
Human Disturbance			x			x
Overall Impression			x			x

COMMENTS:

-Pinnacle shaped rock, 500 ft tall

-Fractured at angles, parallel horizontally

-Few good ledges & potholes

-A couple of roosting sites; could be modified

-"One heck of a lot of rock in here"

-Whitewash seen, extremely good cliff

-Vertical, ledges, down in the valley, no imposing air space

HELICOPTER RESULTS

SITE NAME: ANT POINT

SITE NUMBER: 31

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 1458

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 29-59 m (100-200 ft)

TOTAL SCORE: 3.75-4.0

CLIFF SCORE: 2.0

LEDGE SCORE: 1.75-2.0

GROUND VISIT: Yes

STATUS: Potential/Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability				x		
Ledge Quality				x		
Ledge Location						
Enhancement Potential				x		
Human Disturbance					x	
Overall Impression		x	x		x	

COMMENTS:

-No ledges

-Road

-Not worth enhancement effort

HELICOPTER RESULTS

SITE NAME: HAYDEN ROUGHS

SITE NUMBER: 32

DATE VISITED: 4/7/79

TOTAL SCORE: 2.0

TIME OF ARRIVAL: 1454

CLIFF SCORE: 1.0

TOTAL TIME AT SITE: 2 min.

LEDGE SCORE: 1.0

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT:

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x	x		x		
Ledge Quality	x			x		
Ledge Location	x					
Enhancement Potential		x		x		
Human Disturbance			x			x
Overall Impression	x			x		

COMMENTS:

-Red cliffs

-Both north & south facing sides poor

-"Just a bunch of jagged pinnacles poking up"

-Very shaley

-Nothing to enhance, rates low, not attractive to peregrines, no good food sources

-Elevation: 4600 ft

-Proximity to water: 4 miles

HELICOPTER RESULTS

SITE NAME: N. FORK EEL RIVER/YELLOWJACKET CREEK

SITE NUMBER: 33

DATE VISITED: 4/7/79

TOTAL SCORE: 4.75

TIME OF ARRIVAL: 1445

CLIFF SCORE: 2.5

TOTAL TIME AT SITE: 4 min.

LEDGE SCORE: 2.75

RAPTORS SEEN: 2 adult Golden Eagles

GROUND VISIT: Yes

CLIFF HEIGHT:

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x		x		
Ledge Quality		x				x
Ledge Location		x				x
Enhancement Potential		x			x	
Human Disturbance			x			x
Overall Impression		x				

COMMENTS:

-2 Golden Eagles on point on # 33

-Good cliff facing west (rate as #2); portion that faces south is a vertical cliff, but not high

-Enclosed in a canyon

-Lots of good horizontal ledges, but nothing seen

HELICOPTER RESULTS

SITE NAME: PANTHER ROCK

SITE NUMBER: 34

DATE VISITED: 4/7/79

TOTAL SCORE: 3.0

TIME OF ARRIVAL: 1611

CLIFF SCORE: 1.5

TOTAL TIME AT SITE: 2 min.

LEDGE SCORE: 1.5

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT: 22-25 m (75-85 ft)

STATUS: Unsuitable/Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x				x	
Ledge Location	x				x	
Enhancement Potential	x				x	
Human Disturbance			x		x	
Overall Impression	x					

COMMENTS:

-Small isolated rock sticking out of conifer covered hillside

-Rates #1 all around

-Southeast facing

-3 ledges (none really good), and 1 overhang

-Not a very good site

-Elevation: 3480 ft

-Proximity to water: 3.5 miles

HELICOPTER RESULTS

SITE NAME: HETTEN ROCK

SITE NUMBER: 35

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 1402

TOTAL TIME AT SITE: 3 min.

RAPTORS SEEN: Peregrine or Prairie Falcons

CLIFF HEIGHT: 44-73 m (250-350 ft)

TOTAL SCORE: 6.0

CLIFF SCORE: 3.0

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Highly Suspected/Poss.

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality		x	x			x
Ledge Location				x	x	x
Enhancement Potential						x
Human Disturbance	x			x		
Overall Impression						

COMMENTS:

-Very large site - very fractured, tree covered cliffs (oaks)

-Very accessible to hikers & predators

-Overlooks paved highway

-No visible whitewash

-2 large falcons (prairies or peregrines) seen flying in vicinity of Hetten Rock

HELICOPTER RESULTS

SITE NAME: THE LASSICS

SITE NUMBER: 36

DATE VISITED: 4/7/79

TOTAL SCORE: 3.5

TIME OF ARRIVAL: 1617

CLIFF SCORE: 2.5

TOTAL TIME AT SITE: 7 min.

LEDGE SCORE: 1.0

RAPTORS SEEN: None

GROUND VISIT: Yes

CLIFF HEIGHT: 21 m (70 ft)

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location	x				x	
Enhancement Potential					x	
Human Disturbance					x	
Overall Impression	x			x		

COMMENTS:

-Red conglomerate; rather short cliff; unimpressive

-One nice perch, but that's it (whitewash)

-Only a "potential" - one roost

-Enhancement potential: overlooks a nice, forested valley; birds could drop over other side of ridge-top

HELICOPTER RESULTS

SITE NAME: MAD RIVER ROCK

SITE NUMBER: 37

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 1151-1st visit
1356-2nd visit

TOTAL TIME AT SITE: 6 min. (total)

RAPTORS SEEN: 2 adult Peregrines

CLIFF HEIGHT: ~ 118 m (400 ft)

TOTAL SCORE: 5.5

CLIFF SCORE: 3.0

LEDGE SCORE: 2.5

GROUND VISIT: No

STATUS: Historical/Active

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x		x	
Ledge Quality			x		x	
Ledge Location			x			x
Enhancement Potential			x		x	
Human Disturbance		x		x		
Overall Impression			x			x

COMMENTS:

-Cliff massive, very imposing, incredible amount of open air space

-Eyrie very obvious, made 3 passes by it with helicopter

-Saw Peregrine Falcon standing in pothole facing Van Duzen River

-Fantastic site- #3 all around; Habitat: conifer/oak/grassland

-We need to be careful about classifying sites where we don't see peregrines; these birds were sitting tight; they didn't come off the cliff as easily as prairies

-3 passes before we saw the peregrines, both male and female in air flying

-" I don't think the birds are on eggs " (C. White)

HELICOPTER RESULTS

SITE NAME: CHAULK ROCK (OFF FOREST)

SITE NUMBER: 37A

DATE VISITED: 4/7/79

TOTAL SCORE: 6.0

TIME OF ARRIVAL: 1532

CLIFF SCORE: 3.0

TOTAL TIME AT SITE: 3 min.

LEDGE SCORE: 3.0

RAPTORS SEEN: Peregrine Falcons

GROUND VISIT: No

CLIFF HEIGHT: 118 m (400 ft)

STATUS: Historical/Active

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality			x			x
Ledge Location			x			x
Enhancement Potential						
Human Disturbance		x			x	
Overall Impression			x			x

COMMENTS:

-Elevation: 3000 ft, pine/oak/savannah habitat

-Proximity to water: 2 miles to Van Duzen River

-Historical peregrine nest site (R. Schlorf - Cal. F & G)

-Male peregrine flushed off of cliff, female peregrine incubating at nest

-Human Disturbance: scattered houses within .5 - 1 mile of site

HELICOPTER RESULTS

SITE NAME: BRIDGEVILLE (OFF FOREST)

SITE NUMBER: 37B

DATE VISITED: 4/7/79

TOTAL SCORE: 5.0

TIME OF ARRIVAL: 1536

CLIFF SCORE: 3.0

TOTAL TIME AT SITE: 3 min.

LEDGE SCORE: 2.0

RAPTORS SEEN: Peregrine Falcons

GROUND VISIT: No

CLIFF HEIGHT: 74 m (250 ft)

STATUS: Historical/Active

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x			x	
Ledge Quality		x			x	
Ledge Location		x			x	
Enhancement Potential			x			x
Human Disturbance		x			x	
Overall Impression			x		x	

COMMENTS:

-Elevation: 2800 ft, oak/grassland habitat

-Very conspicuous cliff, dominates surrounding area, on a ridge

-Cliff itself rates #3, but ledges are few - #2

-Whitewash near top and center of cliff

-Female peregrine soaring in front of cliff with 2 Red-tailed Hawks

-Male peregrine incubating eggs; 2 eggs

-Proximity to water: 2 miles to Van Duzen River

HELICOPTER RESULTS

SITE NAME: S. FORK VAN DUZEN RIVER (OFF FOREST)

SITE NUMBER: 38

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1016

TOTAL TIME AT SITE: 5 min.

RAPTORS SEEN: Golden Eagle

CLIFF HEIGHT: 44-89 m (150-300 ft)

TOTAL SCORE: 5.0

CLIFF SCORE: 3.0

LEDGE SCORE: 2.0

GROUND VISIT: No

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

-3 cliffs in area; Elevation: 2800 ft; Proximity to water: .5 mile

-Cliff right on river-south facing; cliff .25 mile up from #38 is #2 all around- no good ledges or whitewash, 150 ft cliff.

-#38 proper - 300 ft cliff, southeast exposure, rather vertical, fractured. Southern portion has one ledge- a roost; very good cliff, rate as #3, high possibility. Down in a canyon. Golden Eagle on cliff on dead snag. Although cliffs are very fractured, ledges are scarce.

-Golden Eagle probably rules out falcons

-Rather extensive set of cliffs, right over river, muddy material(rock) up to halfway up cliff, upper half fractured

-Actual ledge surface sloping down-eggs would roll off - no place to lay eggs. Good potential f[illegible]

HELICOPTER RESULTS

SITE NAME: PILOT ROCK (OFF FOREST)

SITE NUMBER: 39

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1030

TOTAL TIME AT SITE: 2 min

RAPTORS SEEN: None

CLIFF HEIGHT: 74 m (250 ft)

TOTAL SCORE: 5.0

CLIFF SCORE: 3.0

LEDGE SCORE: 2.0

GROUND VISIT: No

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

-Disturbances: road at base, homes scattered around, habitat really modified on west side, clearcutting

-Rock not too high, about 250 ft

-Several overhangs; halfway down there is a nice ledge for manipulation Rock rather fractured, vertical

-3 good spots for ledge enhancement in sheerest, longest part of south side, 40-50 ft from the top

-NW facing side doesn't seem steep enough for ledge presently

-Douglas Fir habitat

-Elevation: 4250 ft; Proximity to water: 2 miles

HELICOPTER RESULTS

SITE NAME: BOARD CAMP BUTTE

SITE NUMBER: 40

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1037

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 29 m (100 ft)

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x					
Ledge Quality	x					
Ledge Location	x					
Enhancement Potential	x					
Human Disturbance			x			
Overall Impression	x					

COMMENTS:

-Cliff rates #1 all around

-"Walk-in" (very accessible)

-Low relief

-Vegetation growing out of face of cliff, lots of fractures, overhang

-No whitewash

-Elevation: 5000 ft

-Proximity to water: 3 miles

HELICOPTER RESULTS

SITE NAME: WEST OF BOARD CAMP BUTTE

SITE NUMBER: 40A

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1041

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: Peregrine sub-adult

CLIFF HEIGHT: 23-29 m (80-100 ft)

TOTAL SCORE: No analysis

CLIFF SCORE:

LEDGE SCORE:

GROUND VISIT: Yes

STATUS: Highly Suspected

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

-South facing, higher portion of cliff has whitewash

-Sub-adult peregrine spotted flying in vicinity

-Roosting spot (whitewash), best spot, series of brownish-gray rocks, hogback ridge

HELICOPTER RESULTS

SITE NAME: GROUSE CREEK

SITE NUMBER: 43

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1054

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 59 m (200 ft)

TOTAL SCORE: 3.5

CLIFF SCORE: 2.0

LEDGE SCORE: 1.5

GROUND VISIT: Yes

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x	x		
Ledge Quality	x				x	
Ledge Location		x		x		
Enhancement Potential	x			x		
Human Disturbance			x			x
Overall Impression						

COMMENTS:

-Steep, cracks, no vertical cracks

-Steep angle - 45°

-Located in area with abundance of cliffs

-Has potentential for future management: one spot for possible ledge enhancement

-One whitewash spot, merely a perch

HELICOPTER RESULTS

SITE NAME: UNDERWOOD MOUNTAIN MOUNTAIN

SITE NUMBER: 44

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1105

TOTAL TIME AT SITE: fly by

RAPTORS SEEN: None

CLIFF HEIGHT: 14-22 m (50-75 ft)

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location	x			x		
Enhancement Potential	x			x		
Human Disturbance						
Overall Impression	x			x		

COMMENTS:

-4 pieces of rock face 50-75 ft

--All rate about a #1

-Elevation: 4600 ft

-Proximity to water: 2 miles

HELICOPTER RESULTS

SITE NAME: SOUTH OF CASTLE ROCK

SITE NUMBER: 45

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1109

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 44 m (150 ft)

TOTAL SCORE: 4.0

CLIFF SCORE: 3.0

LEDGE SCORE: 1.0

GROUND VISIT: Yes

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x					
Ledge Quality	x					
Ledge Location						
Enhancement Potential			x			
Human Disturbance						
Overall Impression		x				

COMMENTS:

-Sheer and slick, high on a ridge

-No ledges on north side

-Lots of good perches

-Good vertical cliff with perches, but no ledges

-One very nice ledge with lots of whitewash around it

-Enhancement potential would make this spot a #3; good spot for enhancement since it's been used a lot

HELICOPTER RESULTS

SITE NAME: CASTLE ROCK VICINITY

SITE NUMBER: 46

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1112

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.5

CLIFF SCORE: 1.5

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

-Less desirable than site #45

-Really fragmented, vertical cliff

-Lots of enhancement potential

-Very crumbly

-Band-tailed pigeons present

-Elevation: 4600 ft

-Proximity to water: 2.5 miles

HELICOPTER RESULTS

SITE NAME: GRAY FALLS

SITE NUMBER: 47

DATE VISITED: 4/8/79

TOTAL SCORE: 6.0

TIME OF ARRIVAL: 1117

CLIFF SCORE: 3.0

TOTAL TIME AT SITE: 6 min.

LEDGE SCORE: 3.0

RAPTORS SEEN: Male Peregrine

GROUND VISIT: Yes

CLIFF HEIGHT: 147-175 m (500-600 ft)

STATUS: Highly Suspected

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality			x			x
Ledge Location			x			x
Enhancement Potential			x			x
Human Disturbance						
Overall Impression			x			x

COMMENTS:

-Enormous cliffs, will be difficult to ground check

-Adult Peregrine Falcon in air near cliff

-Very vertical, fractured horizontally, one pothole

-Mineralization & whitewash

-Unlimited potential here for ledge placement

-Adult peregrine didn't act like a breeding bird; flew away from cliff rapidly, no nest defense

HELICOPTER RESULTS

SITE NAME: TRINITY MOUNTAIN

SITE NUMBER: 48

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1319

TOTAL TIME AT SITE: fly by

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.75

CLIFF SCORE: 1.75

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location	x			x		
Enhancement Potential	x			x		
Human Disturbance		x			x	
Overall Impression	x			x		

COMMENTS:

-Cliffs really short, no ledges, #1 rating

-Second set of cliffs (over the ridge) slope at 70° and are completely surrounded by trees, #1 all around, unsuitable cliff

-One overhang, no ledges, one small unprotected pothole

-Road or trail nearby

-Elevation: 6000 ft

-Proximity to water: 10 miles

HELICOPTER RESULTS

SITE NAME: LADDER ROCKS

SITE NUMBER: 49A

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1302

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 89-119 m (300-400 ft)

TOTAL SCORE: 3.75

CLIFF SCORE: 2.25

LEDGE SCORE: 1.5

GROUND VISIT: Yes

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality		x			x	
Ledge Location						
Enhancement Potential	x					
Human Disturbance			x			
Overall Impression	x	x				

COMMENTS:

-Series of fractured rock, faces south

-Not a lot of rock face available; looks like little pinnacles covered by trees

-West portion - unsuitable

-East edge best of all - 300-400 ft - rates #3 - quite attractive face

-Mineralization

-One nice pothole and waterfall

-Overall impression: not very good

HELICOPTER RESULTS

SITE NAME: LADDER ROCKS

SITE NUMBER: 49B

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1307

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 5.0

CLIFF SCORE: 3.0

LEDGE SCORE: 2.0

GROUND VISIT: Yes

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability					x	
Ledge Quality					x	
Ledge Location		x				
Enhancement Potential					x	
Human Disturbance			x			
Overall Impression						

COMMENTS:

-Fractured, short faces-not very vertical

-One nice face; good looking ledges halfway down cliff

-Top of cliff has broken rock, 45° , accessible to predators

-Two cliffs, a low one and a high one

-"I like this cliff" (Boyce), nice overhang, much more broken

HELICOPTER RESULTS

SITE NAME: LADDER ROCKS

SITE NUMBER: 49C

DATE VISITED: 4/8/79

TOTAL SCORE: 5.0

TIME OF ARRIVAL: 1312

CLIFF SCORE: 3.0

TOTAL TIME AT SITE: 2 min.

LEDGE SCORE: 2.0

RAPTORS SEEN: None

GROUND VISIT: Yes

CLIFF HEIGHT:

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x			x	
Ledge Quality						
Ledge Location						
Enhancement Potential					x	
Human Disturbance						x
Overall Impression					x	x

COMMENTS:

-South side of drainage; lowest cliff tucked away by river

-Lots of fracturing - overhang

-Lots of ledges

-North side of drainage -lower down

-No whitewash visible

-Vegetation on cliff

-Dark, brown mammal with a long, dark head hurrying down hillside (fisher?)

HELICOPTER RESULTS

SITE NAME: DEVIL'S BACKBONE

SITE NUMBER: 50

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1324

TOTAL TIME AT SITE: 1 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 14-22 m (50-75 ft)

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability				x		
Ledge Quality				x		
Ledge Location						
Enhancement Potential				x		
Human Disturbance						
Overall Impression				x		

COMMENTS:

-Very poor, nothing but low rock

-Not really a cliff outcrop

-Looks good from a distance; not good up close

-On a ridgetop

-Elevation: 5300 ft

-Proximity to water: 8 miles

HELICOPTER RESULTS

SITE NAME: SALMON MOUNTAIN

SITE NUMBER: 51

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1329

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: Yes

STATUS: Unsuitable/ Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

-Located on a ridgetop, snowed in, very cold

-Southeast side of Salmon Mtn. fractured

-Rather short cliff, no vertical faces

-Two good ledges, but covered with snow

-Falcons would have to nest late here

-One face - NW - has potential, but is covered with snow

-Flock of Band-tailed Pigeons noted in vicinity

-Overall impression: rather unsuitable

-Elevation: 6900 ft; Proximity to water: 7 miles

HELICOPTER RESULTS

SITE NAME: SHELTON BUTTE

SITE NUMBER: 52

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1337

TOTAL TIME AT SITE: 5 min.

RAPTORS SEEN: Adult Peregrine Falcon

CLIFF HEIGHT:

TOTAL SCORE: 5.0

CLIFF SCORE: 2.5

LEDGE SCORE: 2.5

GROUND VISIT: Yes

STATUS: Historical/Active

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x				x
Ledge Quality		x				x
Ledge Location		x	x			x
Enhancement Potential		x				x
Human Disturbance	x			x		
Overall Impression		x				x

COMMENTS:

-High cliff, many horizontal ledges, excellent site

-Peregrine Falcon sighted flying, landed on a bowl-shaped ledge about 100 ft below top of cliff; shitewash visible

-Both male & female peregrine seen in the air; no eggs seen on cliff

-Human Disturbance: paved road in front of cliff, lots of buildings

-Occupied by peregrines in 1977 & 1978

HELICOPTER RESULTS

SITE NAME: SOMES MOUNTAIN/WHITMORE CREEK

SITE NUMBER: 53A

DATE VISITED: 4/8/79

TOTAL SCORE: 4.75

TIME OF ARRIVAL: 1348

CLIFF SCORE: 2.25

TOTAL TIME AT SITE: 3 min.

LEDGE SCORE: 2.5

RAPTORS SEEN: Male Peregrine Falcon

GROUND VISIT: Yes

CLIFF HEIGHT:

STATUS: Active

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x	x			
Ledge Quality		x				
Ledge Location		x	x			
Enhancement Potential						
Human Disturbance		x				
Overall Impression		x				

COMMENTS:

-Cliff is high on a hill and faces almost due west

-Habitat: quite forested, Klamath River and main road below

-Male peregrine spotted flying; good whitewash ledge near falcon

-Peregrine acted very territorial, went into a soar

-Lots of good ledges here; probably a pair here

-Looks better than I thought at first (White)

HELICOPTER RESULTS

SITE NAME: DOCTOR ROCK

SITE NUMBER: 54

DATE VISITED: 4/15/79

TOTAL SCORE: No Analysis*

TIME OF ARRIVAL: 1056

CLIFF SCORE:

TOTAL TIME AT SITE: 3

LEDGE SCORE:

RAPTORS SEEN: None

GROUND VISIT: Yes

CLIFF HEIGHT:

STATUS:

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

*No analysis due to difficulties in distinguishing which particular "rock" Dr. Rock was among several rocky outcrops in that vicinity; therefore actual site in question.

-Several rocks in the area checked; this site slated for ground check to pinpoint location of Doctor Rock.

-Dr. Rock has special spiritual significance to American Indians living nearby. Enhancement of this area may be a questionable undertaking

-Human Disturbance potentials: in vicinity of Gasquet-Orleans Road

HELICOPTER RESULTS

SITE NAME: SUMMIT VALLEY

SITE NUMBER: 55

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1046

TOTAL TIME AT SITE: 4.5 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 118 m (400 ft)

TOTAL SCORE: 5.75

CLIFF SCORE: 3.0

LEDGE SCORE: 2.75

GROUND VISIT: Yes

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x				
Ledge Quality			x			
Ledge Location			x			
Enhancement Potential			x			
Human Disturbance			x			
Overall Impression			x			

COMMENTS:

-Very large cliff, very extensive, about 400 ft tall, though not vertical

-Looks very promising, several layers, has some vertical sections

-South facing slope, lots of water, heavily forested, mixed stand of trees

-Ledges available, no whitewash yet

-Better than Signal Mtn except not right along a river

-Stream below, overhangs, lower face is more vertical than upper face

-Overall impression: #3 except shy on ledges; no clearcut occasions of falcons using cliff

HELICOPTER RESULTS

SITE NAME: CANTHOOK MOUNTAIN

SITE NUMBER: 56

DATE VISITED: 4/15/79

TOTAL SCORE: 2.5

TIME OF ARRIVAL: 1033

CLIFF SCORE: 1.5

TOTAL TIME AT SITE: 3.25 min.

LEDGE SCORE: 1.0

RAPTORS SEEN: None

GROUND VISIT: Yes

CLIFF HEIGHT: 22 m (75 ft)

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x					
Ledge Quality	x					
Ledge Location						
Enhancement Potential		x				
Human Disturbance						
Overall Impression	x					

COMMENTS:

-Small bluff overlooking Smith River

-#1 cliff, no more than 75 ft high, very small

-Covered with brush, fractured, no whitewash

-Five ledges available overlooking river

-Lots of Band-tailed Pigeons

HELICOPTER RESULTS

SITE NAME: SIGNAL PEAK

SITE NUMBER: 57

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1025

TOTAL TIME AT SITE: 3.5 min.

RAPTORS SEEN: No

CLIFF HEIGHT: 9-12 m (30-40 ft)

TOTAL SCORE: 4.0

CLIFF SCORE: 2.0

LEDGE SCORE: 2.0

GROUND VISIT: Yes

STATUS: Possible/Hist.*

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x				
Ledge Quality		x				
Ledge Location		x				
Enhancement Potential		x				
Human Disturbance						
Overall Impression		x				

COMMENTS:

-Cliff face 30-40 ft, very marginal, fairly crumbly

-Overlooks Smith River, nice area

-Magnificent view, warmer, good air space, might be a magnet for falcons

-Band-tailed Pigeons present

-No sign of any falcons; no whitewash seen

-No good ledges seen

-Historical* according to E. O. Wenzel

HELICOPTER RESULTS

SITE NAME: BROKEN RIB MOUNTAIN

SITE NUMBER: 60

DATE VISITED: 4/15/79 TOTAL SCORE: *

TIME OF ARRIVAL: 1012 CLIFF SCORE: *

TOTAL TIME AT SITE: 3.5 min. LEDGE SCORE: *

RAPTORS SEEN: None GROUND VISIT: Yes

CLIFF HEIGHT: 59-84 m (200-300 ft) STATUS:

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

-Very rocky, not very vertical

-Snow all around, half in clouds, poor visibility of cliff*

-Mostly vertical ledges

-No rock on SE facing side, conifer & snow covered

-No sign of use, no whitewash

-High, cold, snow on ledges

HELICOPTER RESULTS

SITE NAME: N. W. OF DOCTOR ROCK (PEAK 8)

SITE NUMBER: 211

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1104

TOTAL TIME AT SITE: 3 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 44 m (150 ft)

TOTAL SCORE: 4.0

CLIFF SCORE: 3.0

LEDGE SCORE: 1.0

GROUND VISIT: Yes

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality						
Ledge Location						
Enhancement Potential			x			x
Human Disturbance		x			x	
Overall Impression				x	x	

COMMENTS:

-Probably falcons nested previously on Peak 8 rather than Dr. Rock

-Faces north, about 150 ft cliff, vertical face, down in a valley

-No ledges, no place really to nest

-Peak 8 should be checked by ground

GROUND RESULTS

SITE NAME N. Fork Eel River/Red Mtn. Creek

SITE NUMBER 27

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	5/8/79
Aerial Photo Rating	N/A	
Quadrangle	Kettenpom	
Legal Descrip.	T25N,R8E,S5	
Elevation	3000	
Cliff Height	N.rock: 350-400'(105-118m)S.Rock:150-200'(44-59m)	
Cliff Aspect	N.rock: W-WSW, S.rock: W-SSW	
Final Classification	Occupied	

PREY NOTED: Robin, Western Tanager, Piciformes, Blue Grouse, Valley Quail, Mtn Quail, Band-tailed pigeons (not very abundant), Warbler sp., Vireo sp.

RAPTORS NOTED: Red-tail Hawk, Sharp-shin Hawk, Turkey Vulture.

FEEDING HABITAT AVAILABILITY AND QUALITY: Excellent. Good habitat diversity: oak woodland, coniferous forest, open meadows. Riparian habitat along many streams in the area, Eel River canyon for foraging.

SITE RELATION TO WATER: Immediately adjacent to the North Fork of the Eel River at the confluence of Red Mountain Creek.

DISTURBANCE POTENTIALS: Duncan Ranch if developed and logged. Potential U.S. F.S. logging; most timber is greater than $\frac{1}{4}$ mile away.

FACTORS FOR PEREGRINE ESTABLISHMENT: North rock: W-WSW aspect. Large cliff. Many ledges, some overhangs with ledges. Whitewash present about $\frac{1}{4}$ up from bottom, and on south end, as well as other areas. South rock: Ledges present but not noted due to weather. Aspect W with possible SSW. Both: Located on a major river. Falcon sightings in the area in recent years (6/10/78 at Soldier Basin 10 miles n.; owners of Shannon Ranch report falcon sightings); and falcon sighting on this survey by Wenzel on north rock. The Eel River was important historically for peregrine territories (Wenzel).

FACTORS AGAINST PEREGRINE ESTABLISHMENT: North rock: Vertical faces not very large. Cliff very grassy and mossy, many ledges are grassy. Rock is "tucked" facing across Red Mtn. Creek. South rock: Vertical faces small. Less suitable than north rock.

MANAGEMENT RECOMMENDATIONS: Check the site each spring for falcon activity - this is a high priority area for observation due to high suitability of the N.E. Eel River and falcon sightings there. However, the site lies on a small parcel of private land in Section 5 and is surrounded to the north and west by more private land, which restricts management capability. A land exchange to bring the site into F.S. ownership could be considered, as well as ledge enhancement. Restrict logging in the area on F.S. land from mid-February to late July.

DIRECTIONS TO THE SITE: From Garberville take the Alderpoint Road east. From Alderpoint continue east on road to Kettempom, then south on 4515 (Long Ridge Road) to the Duncan Ranch. North rock: continue down road from Duncan Ranch. Rock sits to north of where Red Mtn. Creek enters the Eel. South rock: Observe from end of logging road at switchback opposite north rock or continue across creek (steep gully) to south.

ENHANCEMENT POTENTIAL: See drawing. Less priority than Duncan Ranch site (#28) for enhancement. Many ledges available.

CONCLUDING COMMENTS: Site was observed occupied by a brown-colored falcon,

possibly juvenile peregrine, and a red-tail hawk during ground check 5/8. Falcon came off cliff ¼ way down and stooped at red-tail which also came off cliff 3/4 way down. Falcon flew north and was not observed again; red-tail returned and soared in front of cliff. Identification hampered by weather (snow and rain): poor visibility.

GROUND RESULTS

SITE NAME N. Fork Eel River/Duncan Ranch

SITE NUMBER 28

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	5/8/79
Aerial Photo Rating	N/A	
Quadrangle	Kettenpom	
Legal Descrip.	T26N,R8E,S31	
Elevation	3000	
Cliff Height	200-250 ft (59-74m)	
Cliff Aspect	SW-W	
Final Classification	Highly Suspected	

PREY NOTED: See Site #27.
FEEDING HABITAT AVAILABILITY AND QUALITY: See Site #27.
SITE RELATION TO WATER: Immediately adjacent to the North Fork of the Eel River. Several small streams enter the Eel adjacent to the rock.
DISTURBANCE POTENTIAL: See Site #27.
FACTORS FOR PEREGRINE ESTABLISHMENT: Much whitewash on cliff. SW-W aspect. Falcon sightings in the area in previous years and this year (see Site #27).
FACTORS AGAINST PEREGRINE ESTABLISHMENT: Some ledges are available but they offer little protection from the elements. Ledges are not very good, grassy ledges most prevalent; some available ledges may have access to mammalian predators. Cliff may be unstable. Rock does not command a major view, sits low to river which reduces effective height. Cliff gets a little a.m. sunlight but not much.
MANAGEMENT RECOMMENDATIONS: Check the site yearly for raptor activity- high priority. All the rocks in this vicinity should be considered and pripitized for nest enhancement. Management and enhancement at this site is hindered because it lies right on the border of private land with much private land to the east, south, and west. It could be considered for a land exchange or purchase if feasible.
DIRECTIONS TO THE SITE: See Site #27. From Duncan Ranch walk or drive below ranch. Rock sits at junction of creek (¼ mile south of ranch) and Eel River, on east side of river. If key to Duncan Ranch is obtained, drive past ranch to easy observation of Duncan Ranch and Red Mtn. Creek rock.
ENHANCEMENT POTENTIAL: The cliff could be considered for nest enhancement. Several overhangs are present without ledges below (see drawing).
CONCLUDING COMMENTS: Falcon sightings in the area, high suitability of this section of the Eel, and whitewash on the rock make this a highly suspected site.

GROUND RESULTS

SITE NAME North Fork Eel River/Lightfoot Creek

SITE NUMBER 29

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	5/8/79
Aerial Photo Rating	N/A	
Quadrangle	Kettenpom	
Legal Descrip.	T26N,R8E,S30	
Elevation	3000	
Cliff Height	400-500 ft (118-148m)	
Cliff Aspect	S and SW	
Final Classification	Highly Suspected	

PREY NOTED: Valley Quail, Stellars Jay, Western Tanager, Common Flicker, Blue Grouse, Dark-eyed Junco, other small songbirds heard but not seen.

RAPTORS NOTED: None.

FEEDING HABITAT AVAILABILITY AND QUALITY: Prey was not abundant, probably due to the weather (rain and snow). Habitat is mixed oak woodland with conifers increasing upslope. Forest is broken by open meadows small and large. The Eel River forms a deep canyon for hunting.

SITE RELATION TO WATER: The North Fork of the Eel River flows directly below the cliff flowing north to south. Lightfoot Creek enters the Eel immediately adjacent to the rock to the north.

DISTURBANCE POTENTIALS: Minimal. The forest in the immediate vicinity does not contain much marketable timber. The main use for the area is cattle grazing. Hikers could pose occasional disturbances.

FACTORS FOR PEREGRINE ESTABLISHMENT: Falcon sightings in the area (See Site #27). Large, vertical cliff; 400-500 feet high with a series of different faces that vary from 30 to about 100 feet. Located on a major river. Little or no disturbance. South and s.w. aspect.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Lack of suitable ledges. One ledge was observed low on rock. Near the top are several overhangs without apparent ledges (see drawing).

MANAGEMENT RECOMMENDATIONS: Observe the site each year for peregrine activity - high priority. It should be considered for enhancement - the cliff should be climbed for close inspection of ledge availability and potential. Restrict road-building from Long Ridge Road into the Eel drainage and make no timber harvest plans around the site. High priority site for management among Eel River sites. If peregrine establishment occurs investigate impact from hiker use.

DIRECTIONS TO THE SITE: From Garberville take the Alderpoint Road east. From Alderpoint continue east on road to Kettenpom, then south on 4515 (Long Ridge Road) to the Duncan Ranch, where cliffs are visible. Hike for closer look.

ENHANCEMENT POTENTIAL: There are overhangs present that might accomodate artificial ledges. Due to the crumbly nature of the rock explosives might be considered for the making of potholes. High suitability of the area and rock but lack of suitable ledges make this a likely candidate for enhancement. This is high priority among the N.E. Eel River Sites because it is located entirely on and is surrounded by F.S. land (however there is much private land within several miles).

CONCLUDING COMMENTS: Falcon sightings and high suitability of the area make this site highly suspected.

GROUND RESULTS

SITE NAME N.F. Eel River/Rock Creek

SITE NUMBER 30

		Dates Visited
Forest Name	Six Rivers	5/6/79
Aerial Photo #	N/A	5/7/79
Aerial Photo Rating	N/A	
Quadrangle	Kettenpom	
Legal Descrip.	T26N,R7E,S12&13	
Elevation	3000	
Cliff Height	S. Cliff: 300 ft (88m)	
Cliff Aspect	S and W	
Final Classification	Highly Suspected	

PREY NOTED: Stellar's Jay, Woodpecker sp., Dark-eyed Junco, Robin, Common Flicker, Quail sp.

RAPTORS NOTED: Red-tail Hawk.

FEEDING HABITAT AVAILABILITY AND QUALITY: Prey was not abundant during ground check, probably due to the weather (rain and snow). Habitat is mixed oak woodland with conifers increasing upslope. Forest is broken by open meadows large and small. The Eel River forms a deep canyon for hunting.

SITE RELATION TO WATER: Site is located on the Rock Creek ravine a quarter mile or less from its confluence with the North Fork of the Eel River.

DISTURBANCE POTENTIALS: Minimal. The forest in the immediate vicinity does not contain much marketable timber. The main use for the area is cattle grazing. A trail from Long Ridge Road passes the rocks within view of them on the east side, not more than $\frac{1}{4}$ mile away - hikers may pose occasional disturbances.

FACTORS FOR PEREGRINE ESTABLISHMENT: Large south-facing cliff (about 300 feet in height) adjacent to a major river. Also a west-facing cliff, height not noted. Peregrine sightings in the area (see site #27).

FACTORS AGAINST PEREGRINE ESTABLISHMENT: South and west facing cliffs contain no observable ledges from ground check.

MANAGEMENT RECOMMENDATIONS: Observe the site yearly for peregrine activity-high priority. It should be considered for enhancement; the cliffs should be climbed for close inspection of ledge availability and potential. However management at this site is hindered by 3 parcels of private land in the immediate vicinity, adjacent to the rocks. A land exchange or purchase should be considered to bring these into F.S. ownership if feasible. High priority site for management. Restrict logging and road building. Investigate impact of hiker use of adjacent trail.

DIRECTIONS TO THE SITE: See Site #29. From Long Ridge Road take trail which goes to confluence of the Eel River and Rock Creek, to a ridge opposite the cliff for excellent visibility. There is a south-facing cliff, a west-facing cliff on north side of ravine, and two cliffs down ravine immediately adjacent to the Eel River.

ENHANCEMENT POTENTIAL: There are overhangs present without ledges beneath them which might accommodate artificial ledges. High suitability of rock and area but lack of apparent ledges make this site a likely candidate for enhancement. Of Eel River sites it is second in priority only to Lightfoot Creek (#29) because of some private land in the vicinity.

CONCLUDING COMMENTS: Falcon sightings and high suitability of the area make this site highly suspected.

GROUND RESULTS

SITE NAME Ant Point

SITE NUMBER 31

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	6/25-26/79
Aerial Photo Rating	N/A	
Quadrangle	Black Rock Mountain	
Legal Descrip.	T26N,R12W,S35	
Elevation	5058	
Cliff Height	25' (7m) maximum	
Cliff Aspect	W and north	
Final Classification	Unsuitable	

PREY NOTED: Stellars Jay, Scrub Jay, Rufous-sided Towhee, Green-tailed Towhee, Common Flicker, Dark-eyed Junco, Quail sp.

FEEDING HABITAT AVAILABILITY AND QUALITY: The habitat is a mixture of mixed coniferous forest, scrub oak and manzanita, open ground and rock, and a few grassy meadows. Diverse habitat types. Prey availability is good.

SITE RELATION TO WATER: No water in the immediate area. The headwaters of many creeks begin downslope in all directions. The North Fork of the Eel River is visible looking down the Red Mtn. Creek canyon.

DISTURBANCE POTENTIALS: Little or none. Mature timber is located at such a distance that logging would be of little disturbance. Some disturbance possibly from occasional hikers on trail adjacent to the site.

FACTORS FOR PEREGRINE ESTABLISHMENT: Good prey base.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: There is a fair amount of rock here but it is eroded and broken, lacking any suitable vertical faces or nest sites. High in elevation. Aspects north and west.

MANAGMENT RECOMMENDATIONS: None. The site is unsuitable for peregrine nesting.

DIRECTIONS TO THE SITE: Hwy 36 to Ruth Lake. Drive past the lake on F.S. road 504 to 27N02 to Mike's Rock. Park and take trail #12W03 south to Ant Point.

ENHANCEMENT POTENTIAL: None. No suitable rock for enhancement.

GROUND RESULTS

SITE NAME North Fork Eel River/Yellowjacket Creek

SITE NUMBER 33

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	5/9/79
Aerial Photo Rating	N/A	
Quadrangle	Kettenpom	
Legal Descrip.	T4S,R7E	
Elevation	3000	
Cliff Height	25' (7m) maximum	
Cliff Aspect	West	
Final Classification	Unsuitable	

PREY NOTED: California Quail, Blue Grouse, Black-throated Gray Warbler, Common Flicker, Yellow-rumped Warbler, Downy Woodpecker, Stellars Jay.

RAPTORS NOTED: imm. Red-tail Hawk, adult Golden Eagle at Salt Creek Crossing 5/6, Common Raven.

FEEDING HABITAT AVAILABILITY AND QUALITY: The habitat is oak woodland with some open meadows. The drainage forms a long canyon in which to hunt varied and abundant prey. Conifers are present in greater numbers upslope.

SITE RELATION TO WATER: This site lies at the confluence of Yellowjacket Creek and the North Fork of the Eel River. Salt Creek meets the Eel less than a quarter of a mile to the south. Yellowjacket Creek is a small, intermittent creek, but the Eel and Salt Creek have year around flow.

DISTURBANCE POTENTIALS: Little or none. There is some use by fishermen and campers, mostly later in the spring, but this is slight. Marketable timber is some distance away. Nearest road (Long Ridge) is 1 mile away, nearest trail also one mile.

FACTORS FOR PEREGRINE ESTABLISHMENT: Good prey base. Near to major river system. Falcon sightings in the area (see Site #27). High suitability of the area.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Lack of suitable rock. Rock above Yellowjacket Creek is low and jumbled, lacking suitable vertical faces. There is a small group of rocks above the Eel across from Salt Creek but these too are unsuitable due to lack of height, vertical faces, and ledges.

MANAGEMENT RECOMMENDATIONS: None. Lack of suitable rock makes management for peregrines unfeasible.

DIRECTIONS TO THE SITE: See Site #27. At Salt Creek crossing park and hike down Salt Creek to confluence with the Eel, then hike north along the river.

ENHANCEMENT POTENTIAL: Lack of suitable vertical cliffs at the site makes enhancement unfeasible.

CONCLUDING COMMENTS: There are two cliffs in this area of the North Fork of the Eel which need to be investigated for peregrine nesting suitability. These sites were not indicated in the Six Rivers survey sites provided by the F.S. to the contractor. They were not examined during ground check and whether they were surveyed from helicoptor is questionable due to the numerous (and slightly confusing) cliff sites in the area (they were located from aerial photos subsequent to survey). They are located at the confluence of the Eel and Willow Creek and Tub Creek.

GROUND RESULTS

SITE NAME Hetten Rock

SITE NUMBER 35

		Dates Visited
Forest Name	Six Rivers	5/15/79
Aerial Photo #	N/A	5/29/79
Aerial Photo Rating	N/A	
Quadrangle	Pickett Peak	
Legal Descrip.	T29N,R6E,S13	
Elevation	4000	
Cliff Height	best face: 100' (30m); total: 300' (88m)	
Cliff Aspect	SW	
Final Classification	Possible	

PREY NOTED: Robin, Stellars Jay, Black-headed Grosbeak, Olive-sided Flycatcher, Rufous-sided Towhee, Common Flicker, House Wren, California

Quail, Pileated Woodpecker, Woodpecker sp., Brewers Blackbird, Horned Lark, Nuthatch sp.

FEEDING HABITAT AVAILABILITY AND QUALITY: Excellent. Diverse habitat types: mixed conifer/deciduous forest oak/scrub chaparral, grassy meadows, riparian. Open areas in Hettenshaw Valley. Selective logging in the area has provided ecotones and successional stages, snags for excellent woodpecker habitat. Prey is abundant and diverse.

SITE RELATION TO WATER: An arm of the W.F. Van Duzen River passes below the site ¼ mile to the south. The W.F. Van Duzen itself is 1 mile due west. Ruth Lake is 3 miles to the n.e.

DISTURBANCE POTENTIALS: Moderate. The site is on the edge of a large parcel of private land in Hettenshaw Valley, where there are 4 or 5 ranches 1-2 miles s.e. A paved road passes within 1 mile of the site, a dirt road within ½ mile. However, the valley is relatively undeveloped at this time, and the rock is well-protected from foot access by rugged terrain and thick brush. Timber harvest could cause future disturbance; the area s.w. of the rock within ½ mile is about 25% logged and there is marketable timber remaining in the area.

FACTORS FOR PEREGRINE ESTABLISHMENT: The site has a history of falcon use; falcons sighted in the area in 1978 and 1979. There is a known active peregrine site (#37) 6 miles to the north. Habitat is diverse, prey plentiful. The rock bears sign of recent raptor activity and one suitable nest cliff: on the s.w. side is a "thumb" with a 100' face, s.w. aspect; it contains several potholes and a ledge on the top third with whitewash at that locality.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Human disturbance could discourage falcon establishment (logging, roadwork, road traffic), especially if activity is excessive during breeding season. Though the rock is large it lacks great prominence and effective height. It also lacks suitable vertical faces save for the one noted above.

MANAGEMENT RECOMMENDATIONS: The site should be checked every year for occupation by falcons - high priority. Permit selective logging in the area from July 15-Feb. 1 but not during the breeding season. Restrict further road-building within ½ mile of the rock. Avoid road improvements in the vicinity during the breeding season. The site should be climbed for close inspection of potholes and whitewashed area.

DIRECTIONS TO THE SITE: From Hwy 36 just west of Mad River Ranger Station, take the Zenia Rd. (Van Duzen River Rd.) 15 miles to Hettenshaw Valley and look for Hetten Rock to the west. About 1 mile past first view take dirt road to the right (#2517), follow .7 mile to view of s.w. side of rock and best vertical face.

ENHANCEMENT POTENTIAL: Enhancement is not recommended as present ledges seem suitable. There are 2-3 small potholes and one large ledge on a s.w. vertical cliff.

CONCLUDING COMMENTS: The site is suitable for peregrines and highly suspected for falcon activity in 1979. Falcons have been observed in the vicinity in recent years: by Randy and Elaine Hill (F.S. contractors) in 1977 and from helicoptor by this survey in 1979, but in both cases positive species identification was not made. Also, there is recent whitewash on the cliff; Ron Escano (USFS) reports that new whitewash has appeared since February. The site should be watched closely.

GROUND RESULTS

SITE NAME The Lassics

SITE NUMBER 36

		Dates Visited
Forest Name	Six Rivers	6/26/79
Aerial Photo #	N/A	
Aerial Photo Rating	N/A	
Quadrangle	Blocksburg	
Legal Descrip.	T29N, R6E, Sec 6,24,30,31	
Elevation	5500-5900	
Cliff Height	30-75' (9-22m)	
Cliff Aspect	SW and W	
Final Classification	Historical/Potential	

PREY NOTED: Stellars Jays, Robins, Common Flickers, Valley Quail are common.

FEEDING HABITAT AVAILABILITY AND QUALITY: Mainly mixed coniferous forest, with mixed hardwoods becoming more abundant downslope. Prey does not appear abundant but should improve downslope in the Van Duzen drainage.

SITE RELATION TO WATER: The headwaters of the W.F. Van Duzen River lie on the s.e. side of the mountain, flow s.e. four miles where the river turns 180 degrees and flows n.w. past the Lassics 4 miles east. Ruth Lake and the Mad River are approx. 7 miles to the east. The headwaters of the S.F. Van Duzen River are within one mile due west.

DISTURBANCE POTENTIALS: Logging on the immediate slopes during the spring couldcause future disturbance. A F.S. road provides access to the top of the Lassics close to the cliffs.

FACTORS FOR PEREGRINE ESTABLISHMENT: According to one source, (contact D. Harlow, USFWS) this site is historic for peregrines pre-1945. It is just 3-4 miles from a known active site (#37), which could promote occupation, with still enough distance to permit two territories. It occurs near major river systems. Though most of the rock is unsuitable, there are two small faces which, with effective height, have potential for peregrine nesting: one in the n.e. $\frac{1}{4}$ of Section 25 with a west aspect, and one in the n.w. $\frac{1}{4}$ of Section 6 with a s.w. aspect and one ledge and a whitewashed perch noted. These cliffs are 50-75 feet in height.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: The site is volcanic in origin, consisting primarily of talus, scree, and broken jumbled rock masses lacking substantial vertical faces.

MANAGEMENT RECOMMENDATIONS: Check periodically for sign of falcon activity. The site could be considered for enhancement. The two most suitable cliffs should be climbed for close inspection of ledge availability and enhancement potential. If peregrine establishment occurs close road # 1S07 to public access and restrict road-building, logging, heavy equipment operation on the Lassics from Mid-Feb. to late July.

DIRECTIONS TO THE SITE: On Hwy. 36 just west of Mad River Ranger Station, take the Van Duzen Road south to F.S. road #1507, turn right and follow to site.

ENHANCEMENT POTENTIAL: Possible history of peregrine use, whitewash present, closeness of an active site (#37), and presence of potential cliffs with questionable ledge availability make this a possible site for enhancement.

GROUND RESULTS

SITE NAME Bug Creek Butte (W. of Board Camp Butte)

SITE NUMBER 40A

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	6/4/79
Aerial Photo Rating	N/A	5/7/79
Quadrangle	Pilot Creek/Iaqua Buttes	
Legal Descrip.	T4N,R4E,S32	
Elevation	4500	
Cliff Height	50-100' (15-30m)	
Cliff Aspect	E,W,S	
Final Classification	Highly Suspected/Potential	

PREY NOTED: Common Bushtit, Stellars Jay, Common Flicker, Dark-eyed Junco, California Quail, Band-tailed Pigeon, Green-tailed Towhee.

RAPTORS NOTED: Red-tail Hawk, Turkey Vulture, Common Raven.

FEEDING HABITAT AVAILABILITY AND QUALITY: Very good. Diversity of habitats; ecotones. The area is a mixture of stands of timber, open meadows, oak and brush, and bare areas of talus slides, soil, and sloughy rock. Mad River drainage is easily accessible for foraging.

SITE RELATION TO WATER: Bug Creek surrounds the site on the north, west and south sides and flows south to the Mad River 3 miles downslope. Headwaters of Boulder Creek 1 mile north.

DISTURBANCE POTENTIALS: Low. The site is accessible only by a foot trail and cross-country hiking over rough, bushy terrain. Nearest road is at Board Camp Mtn. 2 miles east. Logging poses only potential threat.

FACTORS FOR PEREGRINE ESTABLISHMENT: Evidence of peregrine occupation. Sighting of peregrine sub-adult on the rock by helicoptor in April. There is a large spot of whitewash on the south exposure of the north section of rock, where the peregrine was perched; another spot of what could be whitewash under an overhang on n.w. exposure of south section of rock. The site has favorable effective height.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: The site is a knife-edge ridge in two sections running south down Bug Creek Butte with aspects west, east, and south. West and east aspects lack great vertical height (50-100 feet) and contain no ledges. South aspect where whitewash is also lacks ledges.

MANAGEMENT RECOMMENDATIONS: Observe for continued sign of raptor activity for next several years. Though the rock is presently unsuitable for nesting, it may be used as a perching area by non-nesters. The site could be considered for enhancement. Main problem with management and enhancement is that the site is surrounded on three sides by private land within 1-2 miles, permitting limited management capability.

DIRECTIONS TO THE SITE: See Site #41. From Rooster Rock proceed south about 5 miles to a spur road which takes a hard righthand turn up a hill. Take spur road ½ mile to Board Camp Mtn. summit, park, and hike west on jeep trail which turns to a foot trail. Foot trail peters out at a small gray butte; hike west cross-country to view of east exposure of rock or past it for view of west exposure. South aspect is difficult

to gain vantage point of due to rough terrain.

ENHANCEMENT POTENTIAL: On the south exposure of the north section of rock, exactly where the whitewash is, there is a cleft in the rock which should accommodate an artificial platform. Though vertical height here is small (about 80'), effective height is good. No apparent overhang is present however.

CONCLUDING COMMENTS: A peregrine sub-adult was turned from this rock by helicoptor 4/8 from a whitewashed perch. However, ground check of the site 6/4 and a fixed-wing flight of the area 5/7 failed to produce further evidence of peregrine occupation.

GROUND RESULTS

SITE NAME Rooster Rock

SITE NUMBER 41

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	5/30-31/79
Aerial Photo Rating	N/A	
Quadrangle	Pilot Creek	
Legal Descrip.	T4N,R4E,S8	
Elevation	5000	
Cliff Height	75-125' (22-37m)	
Cliff Aspect	S	
Final Classification	Potential	

PREY NOTED: Mountain Quail, Dark-eyed Junco, Stellars Jay, Robin, Black-capped Chickadee, Song Sparrow, Common Flicker, Western Kingbird, Woodpecker sp., Nashville Warbler.

RAPTORS NOTED: Red-tail Hawk, Kestral, Turkey Vulture.

FEEDING HABITAT AVAILABILITY AND QUALITY: Fairly heavy forest of oak, douglas fir and cedar in a one mile radius of the site, broken by open space and meadown around Snow Camp Lake. Large open meadows along powerlines 1 mile north and on a ridge 5-8 miles away; there is a small ½ acre meadow ¼ mile from the cliff. Shrubs and 2nd growth fir in the many logged areas. Habitat should support diverse and abundant prey species.

SITE RELATION TO WATER: There is a small lake (Snow Camp) ½ mile to the north, and another 4-5 miles n.w. (Prairie). A small stream runs below the rock, a tributary of the headwaters of Redwood Creek which lies 1.5 miles to the east. Boulder Creek passes 1.5 miles to the s.w.

DISTURBANCE POTENTIALS: High. The site lies in a small parcel of F.S. land surrounded by predominantly privately owned land. The area is laced with logging roads and is heavily logged within a 5 mile radius of the rock. A main road going to Board Camp area passes within a quarter mile. There is much evidence of human activity, camping and shooting: lots of litter, beer cans, empty gunshells.

FACTORS FOR PEREGRINE ESTABLISHMENT: Suitable foraging habitat. There is some whitewash on the cliff, a few spots as though a raptor has used the rock as a perch. The rock is fairly prominent from high elevations to the south. It has a south aspect.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Overall the cliff is not dominant on the landscape. It lacks effective height, is heavily wooded to the base and partially up the cliff itself, sloping, and only 75-100' in

height. A few ledges (1-2) are of small area. Disturbance potentials are high.

MANAGEMENT RECOMMENDATIONS: Heavy private ownership extremely limits management capabilities.

DIRECTIONS TO THE SITE: From Korbel follow signs to Snow Camp Road. Take Snow Camp to intersection several miles past Prairie Lake, and turn right up a steep grade toward Snow Camp Mtn. Follow to ½ mile past road and padlocked gate on right. Turn right and follow past P.G.E. cabin 1-1.5 miles to Rooster Rock. Last 4-5 miles are extremely rutted.

ENHANCEMENT POTENTIAL: Enhancement is not recommended because the area is heavily disturbed and predominantly in private ownership.

GROUND RESULTS

SITE NAME Mt. Andy

SITE NUMBER 42

		Dates Visited
Forest Name	Six Rivers	no helicoptor visit
Aerial Photo #	N/A	6/3/79
Aerial Photo Rating	N/A	
Quadrangle	Iaqua Buttes	
Legal Descrip.	T4N,R3E,S12	
Elevation	5000	
Cliff Height	50-75' (15-22m)	
Cliff Aspect	N,S	
Final Classification	Potential	

PREY NOTED: Western Tanager, Scrub Jay, Stellars Jay, Dark-eyed Junco, Blue Grouse, Common Flicker, Robin, California Quail, Anna's Hummingbird, other small passerines.

RAPTORS NOTED: Golden Eagle, Common Raven, Red-tail Hawk, Turkey Vulture.

FEEDING HABITAT AVAILABILITY AND QUALITY: Good diversity of habitat: stands of prime coniferous forest, areas of mixed small conifers and oaks, open areas of low-growing shrubs and re-growth in surrounding logged zones, large high mountain meadows.

SITE RELATION TO WATER: Site lies immediately adjacent to Little Boulder Creek. Boulder Creek flows s.e. to n.w. less than 1 mile west of site and enters the Mad River at Maple Creek. The Mad River is 4 miles due west.

DISTURBANCE POTENTIALS: Low. The site is remote, many miles from a major road. There is no sign of recent logging in the immediate vicinity, but available timber and location close to logged areas to the north and east may indicate future timber harvest. There are several primitive roads not marked on F.S. map within ¼ mile of the site.

FACTORS FOR PEREGRINE ESTABLISHMENT: Suitable prey availability. Good effective height, overlooking Mad River drainage to the weat.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: The site is a small knife-edge ridge running east and west with north and south aspects. Southern exposure lacks suitable vertical height and contains no ledges. North exposure is slightly higher but also contains no suitable ledges. There is no sign of recent raptor activity on the rock.

MANAGEMENT RECOMMENDATIONS: None. The site is located entirely on private land with only a few F.S. sections close by. Management could only be accomplished by purchase or land exchange, which is pointless because the rock has low suitability.

DIRECTIONS TO THE SITE: See Site #1. From Rooster Rock hike due west 1.5 miles on top of ridge south of Little Boulder Creek.
ENHANCEMENT POTENTIAL:. Low enhancement potential. The only acceptable vertical height is north-facing.

GROUND RESULTS

SITE NAME Grouse Creek

SITE NUMBER 43

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	5/27/79
Aerial Photo Rating	N/A	6/6/79
Quadrangle	Pilot Creek	
Legal Descrip.	T4N,R5E,S12	
Elevation	1400	
Cliff Height	150-175' (44-50m)	
Cliff Aspect	SW	
Final Classification	Possible	

PREY NOTED: Black-headed Grosbeak (abundant), Stellars Jay, Robin, Common Flicker, Western Tanager, Violet-Green Swallow, California Quail, Dark-eyed Junco, Mourning Dove, Townsends Solitaire, other small passerines seen and heard.
RAPTORS NOTED: Turkey Vulture, Common Raven.
FEEDING HABITAT AVAILABILITY AND QUALITY: Good diversity of habitats. Slope north of Grouse Creek is 75% vegetated with deciduous/timber mix, timber dominating. Ridge to east is 75% vegetated with timber and brush, brush dominating, with some dirt slices and rock masses for hunting perches. Open space and meadow along powerline to the south. Sims Creek drainage is heavily timbered with deciduous mix 40%. Valley has open meadows.
SITE RELATION TO WATER: Grouse Creek flows past the cliff near its base, and enters the South Fork of the Trinity River less than $\frac{1}{2}$ mile due East. Grouse Ck. has abundant tributaries west and s.w. of the site 2-5 miles.
DISTURBANCE POTENTIALS: Clear-cutting in vicinity. Logging was occuring during ground check just over ridge to n.w. of site within hearing range. Moderately traveled F.S. road passes the cliff less than 1 mile due south. A foot trail (#6E23) crosses Grouse Creek at base of cliff and passes right next to the cliffs according to map, however present condition of trail was not determined. A power line passes the site about $\frac{1}{2}$ mile to the south. Primary threat is logging.
FACTORS FOR PEREGRINE ESTABLISHMENT: Good relation to water. Overlooks Grouse Creek, close to a major river. There are two possible nesting cliffs in the area. The far lest (west) section above Grouse Creek has good vertical height (150-175') and solid consolidated rock, s.w. aspect (see drawing). There is also a limestone outcropping on west slope above Sims Ck across from Sims Mtn. Jeep Trail: it is 3-400' in total height with continuous

vertical faces up to 100-150'; though ledges are not visible, the rock is sufficiently broken and fractured yet consolidated in sections that ledges may be present. Sims Creek rock has more conspicuous appearance on the landscape and effective height than Grouse Creek rock. Grouse Creek rock has acceptable effective height.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Much of the site above Grouse Creek is unsuitable. The center area is merely vertical dirt embankment with a slide below it. To the far right (east) is an area of rock which is very broken up into large pieces lacking suitable vertical height. There is no apparent whitewash or ledges on most suitable rock here. The Sims Creek limestone outcropping is fairly overgrown with brush and it has much mineral wash but no apparent whitewash.

MANAGEMENT RECOMMENDATIONS: Check the site yearly for peregrine activity. If occupation occurs, close trail #6E23, halt logging in the vicinity for duration of nesting cycle, and avoid roadwork and powerline maintenance for same period.

DIRECTIONS TO THE SITE: From west: Hwy 299 to Berry Summit, turn right at F.S. #7K100 (Horse Mtn. Ski Area rd.) and take #5N10 to 6N08 (Friday Ridge Rd.). From east: Hwy 299 to Friday Ridge Rd. and turn left. Friday Ridge Rd. south to #5N01 (Ammon Ridge Rd.) and turn east; #5N01 to #6N06 and turn south; #6N06 to #4N31 and bear right. At T intersection turn left; at next T intersection turn left and follow ½ mile past Grouse Creek crossing to view of cliff across creek due north.

ENHANCEMENT POTENTIAL: The most suitable rock above Grouse Creek has a number of vertical fractures which may provide suitable locations for an artificial structure.

GROUND RESULTS

SITE NAME South of Castle Rock

SITE NUMBER 45

		Dates Visited
Forest Name	Six Rivers	5/17-18/79
Aerial Photo #	N/A	
Aerial Photo Rating	N/A	
Quadrangle	Pilot Creek	
Legal Descrip.	T33N,R6E,Sec 9	
Elevation	3200	
Cliff Height	165' (48m)	
Cliff Aspect	W	
Final Classification	Potential/Possible	

PREY NOTED: Robin, Violet-green Swallow, Western Tanager, Stellars Jay, Dark-eyed Junco, Anna's Hummingbird, Townsends Solitaire, Scrub Jay.

RAPTORS NOTED: Red-tailed Hawk, Turkey Vulture.

FEEDING HABITAT AVAILABILITY AND QUALITY: Very good. East slope above the Trinity River South Fork is 75% vegetated with stands of timber, oak and madrone, and brush. Opposite ridge similarly vegetated, 70%, with several clear-cut units of 2nd growth and rocky areas for hunting perches. Good habitat diversity and ecctones. The S.F. Trinity Gorge is easily accessible for hunting.

SITE RELATION TO WATER: The South Fork of the Trinity River passes south to north 1.5 miles downslope and due west of the rock. The Trinity River is 4.5 miles to the n.e. Big Lake 2.5 miles n.e. Two streams begin within ½ mile of the site and drain into the Trinity South Fork.

DISTURBANCE POTENTIALS: A F.S. road deadends at a landing within view and 100 yards from the cliff. At the foot of the landing is a small clear-cut (maybe 1 acre). However, continued logging in front of the cliff is unlikely as timber is insufficient and traffic on the road is easily regulated as it is merely a 1-2 mile spur road. Disturbance potentials are generally low. Logging elsewhere in the vicinity could pose a future threat.

FACTORS FOR PEREGRINE ESTABLISHMENT: The rock is a limestone outcropping set high on the ridge overlooking the S.F. Trinity River. Though not particularly large it has great effective height; it has a whiteish color which makes it conspicuous if not extremely dominant, on the landscape. The face is approx. 165 feet in height, west aspect. Some evidence of raptor use: old whitewash, pellets collected in 1978 from center whitewashed ledge (W.R.I., U.S.F.W.S.). Good feeding habitat and plentiful bird activity. Other small rocks close by for lookout perches: w. and n.w. of the cliff ½ mile and at Castle Rock 1-2 miles n.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Lack of suitable nesting ledges. The rock face is very sheer; one ledge with old whitewash about the center of the cliff is extremely small but makes a good perch. Whitewashed area in the lefthand crack does not appear to contain a suitable ledge. No recent sign of raptor use.

MANAGEMENT RECOMMENDATIONS: Check the site yearly for evidence of raptor activity. Avoid logging in the vicinity from the first of February to the end of June. This is an excellent candidate for artificial ledge enhancement. (See Enhancement Potential). If a ledge is installed the spur road #5N08 should be closed to public access to minimize disturbance at the rock.

DIRECTIONS TO THE SITE: Hwy 299 to just s.e. of Burnt Ranch. Take Underwood Mtn. Rd. several miles to three-way intersection, take right fork and follow F.S. road 5N07 to #5N08, avoiding left hand turns. Right at 1N08 to end of road and view of rock. Observe form landing or traverse ridge west several hundred feet.

ENHANCEMENT POTENTIAL: High priority site for ledge enhancement. High suitability and lack of ledges make it an excellent candidate. There is a vertical fracture on the far left of the cliff toward the top which shows evidence of raptor use and might accommodate a platform. Small whitewashed ledge in center (see photograph) might be extended. Limestone substrate should be relatively easy to drill into to accommodate expansion bolts. One potential problem is lack of overhang. The rock should be climbed for close investigation of potential.

GROUND RESULTS

SITE NAME Gray Falls

SITE NUMBER 47

		Dates Visited
Forest Name	Six Rivers/Trinity	
Aerial Photo #	23-16-36	4/29/79
Aerial Photo Rating	B	
Quadrangle	Ironside Mountain	
Legal Descrip.	T35N,R6E,34,35	
Elevation	2000	
Cliff Height	400-500' in total (118-148m)	
Cliff Aspect	W-SW	
Final Classification	Highly Suspected	

PREY NOTED: Common Flicker, Stellars Jay, Nashville Warbler, Band-tailed Pigeon, Pileated Woodpecker, Magpie, Bullock's Oriole, Black-throated Grey Warbler, Dark-eyed Junco, Lazuli Bunting, Western Tanager, Hermit Warbler, Acorn Woodpecker, Violet-green Swallow, Rufous-sided Towhee, Robin, Black-headed Grosbeak, other small passerines.

RAPTORS NOTED: Golden Eagle, unidentified accipiter, Kestral, Turkey Vulture.

FEEDING HABITAT AVAILABILITY AND QUALITY: Excellent. Trinity River gorge and associated riparian habitat harbor abundant and diverse prey species. New River drainage is heavily timbered, also Gray Falls ridgeline to the north, open and grassy directly below cliffs, areas of low brush and oaks on opposite ridge - all provide diverse vegetative cover for large and small prey.

SITE RELATION TO WATER: The site lies at the confluence of the Trinity River and the New River. The cliffs overlook the Trinity River gorge, beginning approx. 500' vertical above the river and running 400-500' to the top of the ridge.

DISTURBANCE POTENTIALS: Low. Although a major highway (299) runs directly across from the cliffs, and there is a residence overlooking the confluence and a trail near the base of the Trinity gorge and up the New drainage, the site is sufficiently protected by the wide expanse of the gorge, vertical height and steepness to make disturbance relatively remote. Access to the top of the cliff from behind cannot be commented on, but from there access to an eyrie could be extremely difficult as well.

FACTORS FOR PEREGRINE ESTABLISHMENT: Massive, conspicuous rock; good vertical expanses. Excellent riverine site. Peregrine sightings in vicinity-by helicoptor on this survey and by E.O. Wenzel in past years. Also rumoured to have been an historical site (R.L. Garrett). Excellent prey base. A known active site at Burnt Ranch (#98) just 2-3 miles to the south could contribute to peregrine establishment, or possibly inhibit it if the area proves too small for two pair.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: No apparent ledges noted, though in the great expanse of rock inconspicuous ledges could have been missed. Historic golden eagle nest territory; much golden eagle activity observed at site during ground check.

MANAGEMENT RECOMMENDATIONS: Check yearly for sign of peregrine activity. This site and Burnt Ranch are high priority for continued close observation. The relationship between the active pair at Burnt Ranch and sightings at Gray Falls should be clarified. If peregrine establishment occurs prohibit logging in the vicinity; and minimize human awareness: observe the site discreetly as is possible from Hwy 299.

DIRECTIONS TO THE SITE: On Highway 299, approx. 10 miles east of Willow Creek and 1.5 miles east of Gray Falls Campground. Cliffs are visible from road.

ENHANCEMENT POTENTIAL: Many cracks, fissures, and depressions should provide a suitable location for an artificial structure. Enhancement would be difficult, however, over most of the rock due to great vertical height.

CONCLUDING COMMENTS: The site was active for golden eagles in 1978, which nested in a tree above the cliffs (Randy and Elaine Hill, USFS contractors). Eagles were observed many times during ground check 4/29/79, once perched in a tree above the cliffs and once perched on opposite ridge. An adult peregrine was turned from the cliff by helicoptor 4/8; it flew south towards Burnt Ranch. Another was observed soaring above the rock by Wenzel in May. Wenzel also reports observing a brown falcon at the site in 1978. Sightings make the site highly suspected.

GROUND RESULTS

SITE NAME Ladder Rocks

SITE NUMBER 49A

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	5/11-12/79
Aerial Photo Rating	N/A	
Quadrangle	Salmon Mtn/Hoopa	
Legal Descrip.	T8N,R6E,S32,33	
Elevation	5000	
Cliff Height	75-150' (22-44m)	
Cliff Aspect	SW	
Final Classification	Highly Suspected	

PREY NOTED: Spruce Grouse, Dark-eyed Junco, Gray Jay, Stellars Jay, Mountain Quail, Chickadee species, flycatcher sp.

RAPTORS NOTED: Red-tailed Hawk.

FEEDING HABITAT AVAILABILITY AND QUALITY: The habitat is predominantly old growth douglas fir, with little to no understory on upper parts of slopes, becoming thicker downslope, dense and riparian along the many streams which drain the area. Subjectively, prey did not appear abundant but is adequate.

SITE RELATION TO WATER: Site is drained by tributaries of Horse Linto Creek, which flows east to west 1.5 miles downslope to the s.w. Headwaters of Tish Tang A Tang South Fork are ½ mile to the north over the ridge. The Klamath River is 7.5 miles to the weat, Trinity River 8 miles south.

DISTURBANCE POTENTIALS: The site is extremely remote and rugged in nature. It is well protected from the few roads in the vicinity by vertical height and steepness of slope, access by foot is difficult. However, disturbance potential is extremely high as the F.S. is planning a timber cut of much old growth douglas fir in the area early in the 1980's, cut would include the area immediately surrounding the site.

FACTORS FOR PEREGRINE ESTABLISHMENT: Reports of peregrine activity in the area by F.S. personnel. Presence of some suitable nesting habitat: There

is a large consolidated rock about the top center of the rock mass which is smooth and lacks ledges but would make a good perch (150' high). Two rock faces east of that toward the top is a very suitable looking whitewashed ledge with overhang. None of the faces are extremely large but effective height is good, about 700' above the road.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Potential for human disturbance. Much of the rock is unsuitable for peregrine nesting: sloughy, lacking adequate sections of consolidated vertical cliff; or where solid vertical rock is available, lacking ledges.

MANAGEMENT RECOMMENDATIONS: Check yearly for sign of falcon activity. This is a high priority site for close observation, as there is reason to suspect activity and it is immediately threatened by a planned timber cut. See Site #49 B and C.

DIRECTIONS TO THE SITE: From Willow Creek take F.S. road #10N02. For access by foot take 10N02 to the end of the road just behind site; traverse south side of ridge to the cliffs. For view from road turn right on #7 road several miles before end of 10N02, and follow several miles to good view of cliffs.

ENHANCEMENT POTENTIAL: Ledge construction could be accomplished on a large rock which lacks apparent ledges on the second rock mass from the west (see drawing). This should be low priority however due to presence of a whitewashed ledge on fourth rock mass over.

CONCLUDING COMMENTS: See Site #49 B and C.

GROUND RESULTS

SITE NAME Ladder Rocks

SITE NUMBER 49 B&C

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	6/7/79
Aerial Photo Rating	N/A	7/24/79
Quadrangle	Salmon Mtn/Hoopa	
Legal Descrip.	T7N,R6E,S3,4,10,11,15,16	
Elevation	5000	
Cliff Height	100-250' (30-74m)	
Cliff Aspect	S, E, W, SE, SW	
Final Classification	Highly Suspected	

PREY NOTED: Band-tailed Pigeon, Western Tanager, Robin, Gray Jay, Spruce Grouse, Stellars Jay, Flycatcher sp.

RAPTORS NOTED: adult Peregrine Falcon, 2 adult Sharp-shin Hawks, Red-tail Hawk, Kestral.

FEEDING HABITAT AVAILABILITY AND QUALITY: Good habitat diversity in area. Mixture of timber, brush, and extensive rock masses on ridges of central Ladder Rocks area. To the east are open areas of low-growing brush on ridgetops. To the north 100% timber, old growth douglas fir (including Site #49A and Tish Tang A Tang drainage). To the west mostly timber. To the south (including southernmost rock mass - sec 15 & 16) is also extensive timber with numerous clear-cuts which provide successional stages and ecotones. Prey species did not seem abundant during ground check but overall area should provide suitable forage.

SITE RELATION TO WATER: All rock masses lie adjacent to and overlooking Horse Linto Creek and its tributaries. The Tish Tang A Tang South Fork is 1-2 miles north of Horse Linto. Horse Range Creek is 1-2 miles south of Horse Linto. The Klamath River is approx. 7 miles west of Ladder Rocks complex, Trinity River approx. 8 miles south.

DISTURBANCE POTENTIALS: The site is located in a relatively remote area. There are some roads around the perimeter of the site (#10N02 deadends ½ mile from Ladder Rocks A but behind and out of sight of rocks; a fork of 10N02 follows Horse Linto Creek, passing within 1 mile of two rock areas, but also deadends short of most of the rock - see map and drawing; #7N10.2 passes within several hundred yards of the southernmost rock); however all rocks are very suitably protected from existing roads and foot access by effective height, very steep slopes, and generally rugged terrain. The primary disturbance potential at this site is logging. Much timber cutting has already occurred in this area south of Horse Linto Creek along Lone Pine Ridge. Extensive stands of commercial timber here and on the north and west sides of the site make future logging very likely. A large timber sale of old growth douglas fir is already planned for 1981-83, which would take in the north third of the Ladder Rocks area and entail serious adverse impacts to the site.

FACTORS FOR PEREGRINE ESTABLISHMENT: This is prime peregrine falcon nesting habitat. Remote and undisturbed, good relation to water, many and extensive rock masses with suitable aspects and vertical faces. Rock d is the most suitable (see map and drawings) with excellent effective height, suitable faces, and probable ledges; rock b should also be suitable. At rock e there is clear evidence of raptor activity - 3 fresh spots of whitewash and two apparent overhung cavities all next to each other. All rocks in the area are set high on the ridges and have good effective height, except rock c. There have been a number of confirmed and possible peregrine sightings, both in the vicinity of Ladder Rocks and in the surrounding area (see Concluding Comments). Also, the site is located within a heavy peregrine use area (See sites #52,53A,53B,53C,84,86,98A) with excellent chances of peregrine establishment.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: High potential for logging disturbance. Also, some of the rock in the area is marginally suitable for nesting peregrines. This includes rock a, which lacks suitable vertical faces, and rock c, which is low on the ridge near Horse Linto Creek and slopes non-vertically.

MANAGEMENT RECOMMENDATIONS: Watch the sites closely for peregrine activity and nesting - this is high priority. Restrict roadbuilding and logging of the Lone Pine Ridge area from mid-February to mid-July. Leave the area north of Lone Pine Ridge (Horse Linto and Tish Tang A Tang drainages) in their present relatively undisturbed state. Discontinue further road building and plans for timber harvest in this area (none year round). If pere-

grine establishment occurs at #49A close access road to public entry, if establishment occurs at rock e close road #7N10.2 to access. Take all steps necessary to ensure the integrity of the area and protect establishing peregrines. The area could well be considered for endangered species critical habitat status.

DIRECTIONS TO THE SITE: For rock a: From Willow Creek take F.S. #10N02 north to approx. 2 miles before 10N02 deadend, and turn right onto a #7 road (not on map). Go past Ladder Rocks A (#49A) to where the road is washed out, walk down road to next creek and hike up creek (difficult hike). For rocks b,c,d,e: From Hawkins Bar on Hwy 299 turn north on Denny Road. After bridge at T intersection turn left, go 1.3 miles to right turn (#7N26). Follow 7N26 15.5 miles to multiple intersection, turn left on #7N10 and then right onto #7N10.2. Follow .8-1.3 miles for various views of Ladder Rocks: .8 mile for rock b,c, and the tip of a, 1 mile for rocks d and e, 1.3 miles to end of road for wide view of Ladder Rocks including Ladder Rocks A (#49A). Strong scope required.

ENHANCEMENT POTENTIAL: High suitability and extensive nature of the rock with some probable and many possible nest sites makes ledge enhancement probably unnecessary. The cliffs with whitewash and suspected suitable ledges should be climbed for verification, however.

CONCLUDING COMMENTS: High suitability and considerable evidence of peregrine activity make Ladder Rocks a highly suspected area: At site #49A there is a ledge with whitewash, at 49B & C rock e there are 3 spots of whitewash and 2 overhung cavities. Peregrine sightings in the area as follows: Possible 2 adult peregrines seen near #49A by F.S. personnel on 7/31/79; very possible adult peregrine seen T8N,R5E,S1 by F.S. personnel on 6/27 (6 miles from site); Ron Escano (USFS) very possibly heard peregrines from #7 access road near its end at Horse Linto Creek, confirmed an adult peregrine in 1/79 at Sugarbowl Ranch near confluence of Horse Linto Creek and the Trinity River; adult peregrine seen by F.S. personnel at Grogon Hole in 1978 (4 miles from site); an adult peregrine was confirmed at Ladder Rocks on this survey during ground check on 7/24; it was observed from the end of F.S. road #7N10.2 to fly from downslope of the landing there, north across the Horse Linto drainage - it did not orient to a particular rock mass.

GROUND RESULTS

SITE NAME Salmon Mountain

SITE NUMBER 51

		Dates Visited
Forest Name	Six Rivers/Klamath	
Aerial Photo #	N/A	7/3/79
Aerial Photo Rating	N/A	
Quadrangle	Salmon Mountain	
Legal Descrip.	T9N,R7E,S8	
Elevation	6900	
Cliff Height	Best face: 100-150' (30-44m)	
Cliff Aspect	Best faces: N	
Final Classification	Unsuitable	

PREY NOTED: Stellars Jay, Robin, Common Flicker, Western Tanager, Black-headed Grosbeak, Dark-eyed junco, Quail sp., Grouse sp., Flycatcher sp.

RAPTORS NOTED: Red-tailed Hawk, Kestral.

FEEDING HABITAT AVAILABILITY AND QUALITY: The habitat is mixed coniferous forest and open mountain meadow. Some of the open areas are thick with brush. The mountain is well drained by creeks and canyons and contains several lakes. There is diversity of habitat types, good edge. Prey availability appears good.

SITE RELATION TO WATER: Salmon Mtn. contains the headwaters of Nordheimer Creek, Knownothing Creek, and an arm of Redcap Creek. There are 3 small lakes within a mile radius, two on east side just below the rocks and one on s.w. side (Redcap). The Klamath River is approx. 10 miles to the n.w. The Salmon River is about 7 miles n.e.

DISTURBANCE POTENTIALS: Generally low. The site is remote, Salmon Mtn. is nearly roadless. The ridgetops are well cut by foot trails which may receive heavy use by hikers in spring and summer. Logging could pose future disturbance potential.

FACTORS FOR PEREGRINE ESTABLISHMENT: Suitable prey base. This site is only 11-12 miles from two known active sites (#52 & 53 A). There have been peregrine sightings in the area by F.S. personnel in late summer, 1978.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Very high in elevation. Lack of suitable faces and aspects. There are many rocks but few vertical expanses. One face on the east side is 100-150' in height but faces north. There are some cliffs along the ridge just to the south of Salmon Mtn, they too face north and still have snow on some of their ledges. There is no suitable rock on the west side.

MANAGEMENT RECOMMENDATIONS: Check the site periodically for peregrine occupants; this may be a perching area for a local pair or for passing unsettled sub-adults or adults. Its high elevation and wide view, with perching rocks, may make it attractive for this.

DIRECTIONS TO THE SITE: At Orleans, take Redcap Rd. to F.S. road #10N01 and turn left. Take to trailhead near Whitey's Peak and hike to site.

ENHANCEMENT POTENTIAL: Lack of suitable rock and aspects and high elevation make enhancement very low priority.

CONCLUDING COMMENTS: Though peregrines have been sighted at Salmon Mtn, it is felt the site has little potential for nesting. The few suitable vertical cliffs all face north and at a very high elevation; some had snow in July. Passing falcons may be inclined to perch here for a while but nesting is unlikely. The site is in the middle of a clumped peregrine distribution.

GROUND RESULTS

SITE NAME Shelton Butte/Bluff Creek

SITE NUMBER 52

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	5/22-23/79
Aerial Photo Rating	N/A	5/28/79
Quadrangle	Hoopa	
Legal Descrip.	T10N,R5E,S20,29	
Elevation	2000	
Cliff Height	up to 150' (44m)	
Cliff Aspect	W	
Final Classification	Historical/Active	

PREY NOTED: Common Flicker, Stellars Jay, Band-tailed Pigeon (observed as prey), Western Tanager (abundant), Black-headed Grosbeak, Violet Green

and Tree Swallow, Ruby-crowned Kinglet, Robin, Varied Thrush, Vaux's Swift, Great Blue Heron.

RAPTORS NOTED: Screech Owl (on cliff), Osprey, Raven, Red-tailed Hawk, 3 adult Peregrine Falcons.

FEEDING HABITAT AVAILABILITY AND QUALITY: Excellent. River and mountain canyons present. Vegetation is diverse. Many successional stages, ecotones. Good edge effect.

SITE RELATION TO WATER: Site is within $\frac{1}{2}$ mile horizontal from Klamath River. Shelton rock is about 800 vertical feet above river, across canyon from Bluff Creek drainage. Bluff Creek cliffs begin near confluence with the Klamath.

DISTURBANCE POTENTIALS: Low at Shelton Butte due to extreme difficulty of access, though a dedicated falcon disturber may be able to reach eyrie. If nesting cliff exists on Bluff Creek disturbance potential is only moderate from fishermen because area is relatively invisible from highway 96.

FACTORS FOR PEREGRINE ESTABLISHMENT: A pair is present in 1979. Possibly a re-occupation site; no peregrines were observed here pre-1974; Wenzel first reports it active in 1975. West aspect. Shelton is a magnet territory. Large effective height, conspicuous location. Close to major river. Nesting success in some of last five years. Suitable grassy ledges are available on Shelton.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Unexplained behavior of present pair. Low success or failure in some past years (Wenzel for recent history of site). Bluff Creek cliffs are probably inadequate or only marginally suitable for nesting peregrines - ephemeral slide cliffs, low effective height.

MANAGEMENT RECOMMENDATIONS: Observe closely in succeeding years to determine nesting status. Eyrie needs to be located and climbed if feasible. Determine eggshell pesticide residues. Site should be considered for a foraging behavior study. No guard is needed. Observation is recommended on a bi-weekly minimum basis, by experienced, not beginning, observers as viewing is difficult.

DIRECTIONS TO THE SITE: Located 4-5 miles north of Weitchpec on Highway 96, near confluence of Klamath River and Bluff Creek. Observe Bluff Creek drainage from Fish Lake Road (#10N12) or Twin Lakes Road (#11N05). View Bluff Creek Cliffs or Shelton cliffs from side road off Fish Lake Rd. about 2 miles from 96.

ENHANCEMENT POTENTIAL: Ledge enhancement is not recommended as the site is extremely rugged and difficult of access, and because present ledge availability appears adequate.

CONCLUDING COMMENTS: A pair is present at this site in 1979, plus a third adult observed 5/22. However, nesting status was not confirmed. A pair was observed with defensive behavior in Bluff Creek vicinity, the less suitable nesting rock. Only single adults without defensive behavior were observed at Shelton Butte, the more suitable nesting rock. No young observed. Site probably failed or is a territorial non-breeding pair. An adult was observed perched on both Bluff Creek and Shelton Butte cliffs. Possibility of two pair is felt to be minimal.

GROUND RESULTS

SITE NAME Somes Mtn./Fivemile Ck.

SITE NUMBER 53A

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	5/23/79
Aerial Photo Rating	N/A	6/16/79
Quadrangle	Forks of Salmon	
Legal Descrip.	T11N,R6E,S16	
Elevation	3200	
Cliff Height	largest face: 200' (59m)	
Cliff Aspect	W-NW	
Final Classification	Active	

PREY NOTED: Black-headed Grosbeak, Robin, Spotted Sandpiper, Common Flicker (abundant), Band-tailed Pigeon, Lark Bunting, Mourning Dove, Nuthatch and Chickadee sp. heard but not seen.

RAPTORS NOTED: None.

FEEDING HABITAT AVAILABILITY AND QUALITY: Subjectively, the foraging habitat available to this pair is excellent. Both Klamath and Salmon River canyons available, mountain canyons and ridges. Avifauna appears diverse and abundant.

SITE RELATION TO WATER: The Klamath River is less than 1 mile to the west. Salmon River is less than 4 miles away. Fivemile Creek begins near base of cliffs. Whitmore and Ikes Creek also in vicinity.

DISTURBANCE POTENTIALS: A trail passes quite close to the top of the cliffs, but access to the cliffs and visibility of people to the falcons (and vice-versa) was not determined. General impression is that the site is unobtrusive to view from highway and largely inaccessible to humans, due to high position on ridge and very steep rugged nature of slope. As long as the site remains relatively unknown, logging in the area should be the only disturbance threat.

FACTORS FOR PEREGRINE ESTABLISHMENT: A prime peregrine cliff. Large effective height; many broken rock faces, largest vertical face 200+ feet. Located close to a major river. Ledges available. Whitewash evident; amount of whitewash suggests this site has been occupied for several years. Adjacent pairs (site is in the middle of a clumped peregrine site distribution) make it likely that continued occupancy will occur, and in event of inactivity that re-occupancy would occur.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: West to n.w. aspect possibly.

MANAGEMENT RECOMMENDATIONS: Observe yearly for evidence of falcon activity. Not a beginners cliff to determine occupancy and success as vantage point is one mile distant. Observation recommended via Celestron or Questar or from closer point if feasible. Leave as non-guarded site for the present as disturbance potentials should be low, and since the site is newly discovered it should be little known. Investigate extent of use of the trail above cliffs and ease of access by foot to determine protection requirements. Avoid logging in the area from mid-February to late June.

DIRECTIONS TO THE SITE: From Orleans take F.S. road #9R100 north several miles and observe from road. Light for observation is best in the afternoon and evening.

ENHANCEMENT POTENTIAL: Enhancement is not recommended at this site because it

is active and ledge availability appears adequate.

CONCLUDING COMMENTS: The site is active for peregrines in 1979. An adult female peregrine was confirmed on the cliff 5/23 during ground check, and a second adult and a food exchange possibly observed. An eyrie with two young was believed to be located (see drawing) but not confirmed due to inadequate scope strength. An attempt to verify fledging with Celestron scope 6/16 failed due to rain. Adults were observed at the site by Wenzel on several occassions subsequent to initial ground survey.

GROUND RESULTS

SITE NAME Doctor Rock

SITE NUMBER 54

		Dates Visited
Forest Name	Six Rivers	no helicoptor visit
Aerial Photo #	N/A	5/30/79
Aerial Photo Rating	N/A	
Quadrangle	Ship Mountain	
Legal Descrip.	T13N,R3E,S1&2	
Elevation	4900	
Cliff Height	50-75' (15-22m)	
Cliff Aspect	All	
Final Classification	Potential	

PREY NOTED: Stellars Jay, Anna's Hummingbird, Common Flicker, Green-tailed Towhee, several small passerine species heard and glimpsed but not identified.

RAPTORS NOTED: Cooper's Hawk.

FEEDING HABITAT AVAILABILITY AND QUALITY: Good diversity of habitat: abundant stands of timber, open meadows along ridge from Peak 8 to south side of Dr. Rock, bare scree at Peak 8 summit and down west side, dense brush down east side. Slope on opposite ridge to the s.w. 65% cleared of timber, 20% very recent clear cuts, providing successional stages and ecotones.

SITE RELATION TO WATER: Site lies in the center of the Blue Creek drainage: Blue Creek 1.5 miles s.e., East Fork Blue Creek 4 miles s.e., Crescent City Fork Blue Creek 2.5 miles due west. Williams Creek drainage begins 1.5 miles to the north. Nearest major river is the S.F. of the Smith 7.5 miles due north. Klamath River is 10 miles s.e.

DISTURBANCE POTENTIALS: Planned completion of the G.O. Road, which presently ends 1.5 miles north of the site. Road construction at that distance would pose definite disturbance potential to the site, and would open the area to increased logging and logging traffic. The site is easily accessible by foot via a trail from the G.O. Road which passes by the rock several hundred yards to the east. Someone has cut a path through the brush on west and south side of the rock.

FACTORS FOR PEREGRINE ESTABLISHMENT: The rock is a conspicuous feature on top of the ridgeline. Feeding habitat appears diverse. Distance to major rivers is 7-10 miles but the site is located in an excellent drainage system (Blue Creek). One small ledge on east exposure.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Lack of suitable nest cliffs and aspects. Peak 8 1 mile north has good vertical rock (150-200') with possible ledges but it faces n.e. Dr. Rock itself is a large knob of rock with aspects in all directions but it lacks suitable vertical height (50-75') and vertical faces. It contains only three discernible ledges and two face n.w. and n.e. and are small. There is no visible evidence whatever of raptor activity on the rock. There is significant potential for future disturbance in the area. Little effective height because the slopes from base of rock are not steep.

MANAGEMENT RECOMMENDATIONS: Very low suitability of the rock - low priority for management efforts.

DIRECTIONS TO THE SITE: Take South Fork Road (F.S. #427) south from 199 halfway between Crescent City and Gasquet to F.S. road 15N01 just west of Big Flat Station. Follow 15N01 to a pavement turnout on the right several hundred yards before the road ends. Take gravel trail running uphill to foot trail on the left to Doctor Rock.

ENHANCEMENT POTENTIAL: Low. South exposure has no substantial vertical faces, low in height. East exposure might accept an artificial structure but is also low in height and has trees growing up in front of the rock at its base, which reduces visibility and offers perches for predators.

GROUND RESULTS

SITE NAME Summit Valley

SITE NUMBER 55

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	5/22-23/79
Aerial Photo Rating	N/A	5/30/79
Quadrangle	Ship Mountain	
Legal Descrip.	T14N,R3E,S22	
Elevation	4900	
Cliff Height	Vertical faces: 80'(23m),500-600'total(150-175m)	
Cliff Aspect	E-SE	
Final Classification	Possible	

PREY NOTED: Robin, Hermit Warbler, Yellow-rumped Warbler, Dark-eyed Junco, California Quail, Stellars Jay, Hermit Thrush, Blue Grouse, Band-tailed

Pigeon, Common Flicker, Woodpecker sp., Nuthatcher sp.

RAPTORS NOTED: Coopers Hawk.

FEEDING HABITAT AVAILABILITY AND QUALITY: Mixed conifers and brush on west ridge south of rock and on ridges both sides of valley. Open meadows and brush on top of west ridge above site. Clear-cuts to the west and north provide edge and ecotones. Good habitat diversity, prey availability seems good.

SITE RELATION TO WATER: South Fork of the Smith River 3 miles to the north. Buck Creek drainage begins 1 mile to the west. Williams Creek drainage begins at the upper reaches of Summit Valley next to the G.O. Road and flows north past the base of the rocks to Eightmile Creek 2 miles n.w.

DISTURBANCE POTENTIALS: Low at this time. The G.O. Road passes within ½ mile south of the site but access by foot is discouraged by rugged slopes and thick brush. Traffic is presently scarce as the site is near the end of the G.O. Road. Planned extension of the G.O. Road would greatly increase traffic and open the vicinity to increased logging. Clear-cutting has already occurred to the west and north within several miles.

FACTORS FOR PEREGRINE ESTABLISHMENT: East to southeast aspect. This is a large mass of granitic rock 500-600 feet in height running about halfway up the ridge from Williams Creek. There is another mass of rock on the opposite east ridge near the top about ¼ mile north from the G.O. Road. It appears to have vertical faces up to 100 feet in height with a generally west aspect, however it is mostly obscured by timber and very difficult of foot access so suitability could not be determined.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Though there is a large mass of rock, it is very jumbled and broken with vertical faces only about 80'. No apparent ledges or sign of raptor activity was noted. The rocks are fairly conspicuous but not particularly dominant, and sit low in the drainage lacking good effective height. They did not appear as impressive from the ground as from the air.

MANAGEMENT RECOMMENDATIONS: Check the site yearly for evidence of raptor activity. Avoid logging north of the G.O. Road in Summit Valley, especially during the spring.

DIRECTIONS TO THE SITE: From Hwy 199 halfway between Gasquet and Crescent City take South Fork Rd. (F.S. #427) to #15N01 at Big Flat Station. Follow 15N01 to the turnout on the left overlooking Summit Valley. The rocks are on the west side. Part of the mass can be seen from the road. Hike along the east ridge about ½ mile to a small rocky outcropping for a more direct view.

ENHANCEMENT POTENTIAL: Small vertical faces and low effective height make this site low priority for ledge enhancement.

GROUND RESULTS

SITE NAME Canthook Mtn.

SITE NUMBER 56

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	5/15/79
Aerial Photo Rating	N/A	5/21/79
Quadrangle	Ship Mountain	
Legal Descrip.	T15N,R2E,S4	
Elevation	1000	
Cliff Height	Best cliff: 75-100' (22-30m)	
Cliff Aspect	W	
Final Classification	Possible	

PREY NOTED: Band-tailed Pigeon, Anna's Hummingbird, Violet-green Swallow, Western Tanager, Common Flicker.

RAPTORS NOTED: Red-tailed Hawk, Turkey Vulture, Common Raven.

FEEDING HABITAT AVAILABILITY AND QUALITY: East slopes above the Smith and along Gordon and Canthook drainages are heavily timbered with small rock masses and some deciduous brush mix. West slopes above the Smith are timber/brush mix with brush dominating and areas of dirt slides. Riparian habitat along the Smith with hardwoods, open grassy areas and gravel bars. A timber cut on Hardin Mtn. has created regrowth and ecotone. Subjectively, habitat is not particularly diverse but is adequate.

SITE RELATION TO WATER: The South Fork Smith River flows s.e. to n.w. at base of ridges containing the rocks. Gordon Creek enters the Smith on north side of Canthook. Canthook Creek drainage enters Smith on south side, Hurdygurdy Creek on the south side of Hardin Mtn. next to Canthook Mtn.

DISTURBANCE POTENTIALS: All the rocks are across the S.F. Smith close to and within view of the Gasquet - Orleans Rd., which is moderately traveled at this time by passenger cars and logging trucks. Extensive road work is presently occurring several miles north of the site, and a very narrow stretch of road south of that and poor conditions elsewhere could indicate further roadwork in the making. Planned extension of the G.O. Rd. near Doctor Rock would increase traffic past this site, however vertical protection of the most suitable rock should be adequate. Steep loose terrain should discourage foot access. The most serious disturbance threat is possible logging of available timber in the area. Timber cutting has already occurred on Hardin Mtn.

FACTORS FOR PEREGRINE ESTABLISHMENT: Good relation to water, overlooks a major river and close to several large streams. The most suitable rock is on the ridge n.w. of Canthook Mtn. Though it is not great in height (75-100') it is 2/3 up the ridge with good effective height, west aspect, and has numerous fractures which may contain suitable ledges though none were apparent. The rock at the southern tip of Hardin Mtn. is similar: high on the ridge, heavily fractured with possible ledges and little vertical height, but this rock has some whitewash. There have been frequent peregrine sightings by F.S. personnel at the first rock mentioned above: a peregrine was observed to fly off the rock early this season by Kurt Mullis; another F.S. employee of Gasquct

Ranger District has observed peregrine activity in the vicinity of this rock every year for the past 3-4 years.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Much of the rock in the area has no suitable vertical faces, no apparent ledge development, and inadequate effective height as protection against G.O. Road disturbance. Small rock masses on Canthook Mtn. and some on Hardin Mtn. are far down the ridge toward the Smith River directly across from the road.

MANAGEMENT RECOMMENDATIONS: Observe the site yearly for continued sign of peregrine activity - high priority. The site should be considered for enhancement (see Enhancement Potential). Known peregrine activity in the area and apparent lack of ledges make it a suitable candidate. If a platform is installed the site should be observed closely for nesting establishment. Minimize public awareness of any enhancement procedures or peregrine activity. Prevent logging or road building close to the site. Road work on the G.O. Road across from the site should be confined to late June to mid-February.

DIRECTIONS TO THE SITE: From Hwy 199 7 miles west of Gasquet turn south on South Fork Road along the South Fork Smith. Proceed to Canthook Mtn. vicinity about 2 miles north of Smith River crossing.

ENHANCEMENT POTENTIAL: The most suitable rock on the ridge n.w. of Canthook has questionable ledge development, but has had numerous peregrine sightings and may have potential for enhancement. The rock is fractured with vertical cracks where a platform might be placed with suitable overhang. The rock should be climbed for close inspection of enhancement potential.

GROUND RESULTS

SITE NAME Signal Peak

SITE NUMBER 57

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	5/6/79
Aerial Photo Rating	N/A	5/8/79
Quadrangle	Crescent City	5/15/79
Legal Descrip.	T17N,R1E,S22	5/16/79
Elevation	2000	
Cliff Height	100-125' (30-37m)	
Cliff Aspect	SE	
Final Classification	Historical/Occupied	

PREY NOTED: Black-throated Gray Warbler, Violet-green Swallow, Common Flicker, Band-tailed Pigeon, Dark-eyed Junco, Anna's Hummingbird, Scrub Jay, Stellars Jay, plus 3-5 small passerines heard but not identified.

RAPTORS NOTED: Common Raven, Turkey Vulture, Red-tail Hawk.

FEEDING HABITAT AVAILABILITY AND QUALITY: The south side of Signal is dense with small conifers mixed with oak, madrone, and manzanita, broken by open areas of rock and talus slides. Opposite ridge is 40% mature timber 60% deciduous growth, ridge west of Signal is predominant with timber. Vegetation is generally dense and diverse providing good cover and forage for prey small to large. Riparian habitat available along water courses.

SITE RELATION TO WATER: The Middle Fork of the Smith River is 1/3 mile downslope to the s.e., fully in view of site. The main fork of Hardscrabble Creek ½ mile to the east flows north to south and enters the Smith. A tributary of Hardscrabble flows east down Signal. Myrtle Creek 1 mile west.

DISTURBANCE POTENTIALS: The recent "Signal" timber sale came to within ¼ mile n.w. of Signal Peak. There is a powerline which passes just behind the site on the north side and runs down the east saddle, and another powerline is planned to be built right next to the one standing. Construction during the breeding season in vicinity of site could severly disrupt peregrine establishment. Future logging in the area could pose disturbance potential. Site is well protected from disturbance from Rt. 199 below by great vertical height and steep loose slope.

FACTORS FOR PEREGRINE ESTABLISHMENT: Site is historic for peregrines; Wenzel reports an active pair with young fledged in 1975. Peregrine sightings in 1979 by F.S. Personnel. Though not particularly dominant, rocks are set high on a ridge overlooking a major river, with a s.e. aspect. Good prey base. There are several vertical faces to the far left of rock mass (from road) which are small but suitable, as they have excellent vertical height; ledges not noted.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Most of the rock is jumbled and broken without suitable vertical sections. Possibility for human disturbance.

MANAGEMENT RECOMMENDATIONS: Site should be checked each year for occupation and success by peregrines. Avoid powerline construction and maintenance in the vicinity of the site from mid-February to late May. Avoid logging in area for same duration. Minimize human awareness of the site; it is accessible on foot, if with difficulty, from below at road and from behind at top via F.S. roads. Avoid extended observation from the road at conspicuous locations as it attracts attention. The suitable cliffs should be climbed for close assessment of ledge availability.

DIRECTIONS TO THE SITE: From Crescent City take Rt 199 east to the Hardscrabble Creek crossing and backtrack several hundred yards to view of cliffs. Hike up slope for closer look (very difficult). Or take North Bank Road from 199 about 6 miles s. of Signal, to Low Divide Road (#305) on right to #17N21 to #17N22, park and hike. Access to just behind the rock is available via 4WD road (get directions at Gasquet R.S.), but a difficult hike around the peak is required for view of vertical faces. Ground check was turned back several times by Signal Peak being fogged in; consideration of the weather is important at this site especially early in the season, as it is close to the coast.

ENHANCEMENT POTENTIAL: Though the site was active in 1975, lack of known successful nesting since then may indicate inadequate eyrie locations. The site should be climbed for assessment of ledge availability and enhancement needs. Ledges not determined during ground check.

CONCLUDING COMMENTS: Though an occupying adult was noted by F.S. personnel early in the 1979 season, no peregrines were observed on this survey by helicoptor or ground check. A subsequent visit by D. Harlow (USFWS) failed too to produce late season sightings. The site was probably abandoned.

GROUND RESULTS

SITE NAME Bear Mtn./Devil's Punchbowl

SITE NUMBER 58

Forest Name	Six Rivers/Klamath	Dates Visited
Aerial Photo #	35-85	6/19-20/79
Aerial Photo Rating	A	
Quadrangle	Preston Peak	
Legal Descrip.	T16N,R5E,S6,7	
Elevation	5700-6200	
Cliff Height	400-500' total (118-148m); faces up to 200' (59m)	
Cliff Aspect	E, N, W	
Final Classification	Possible	

PREY NOTED: Prey was scarce in the immediate vicinity: Stellars Jay, Robin, a few unidentified small passerines. In the drainage below: Band-tailed Pigeon, Robin, Stellars Jay, Common Flicker, other small passerines.

FEEDING HABITAT AVAILABILITY AND QUALITY: The habitat within the basin is mostly bare rock with alpine shrubs and groves of stunted conifers. Increasing mixed conifer forest with some hardwoods downslope in the Clear Creek drainage. South-facing slopes tend to be covered with dense brush. Prey was scarce in the Punchbowl area but increases downslope in the vegetated drainages.

SITE RELATION TO WATER: There are two small lakes in the Punchbowl with a small creek running between them n.e. about 1 mile to Clear Creek. Clear Creek flows s.w. 20-25 miles to the Klamath River. To the east of Bear Mtn within a mile are the headwaters of the S.F. Smith River.

DISTURBANCE POTENTIALS: Backpackers commonly use the valley for camping. However use in the early spring should be light due to elevation, and the cliffs are adequately protected by vertical height to discourage access by foot.

FACTORS FOR PEREGRINE ESTABLISHMENT: High dominant cliffs with excellent effective height. Total height of rock mass is 4-500 feet with vertical faces up to 200 feet. Numerous ledges present (see drawing). Some suitable aspect. The cliffs form a circle or bowl, with aspects facing east, north, and west.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Elevation is 6000 feet or more; snow was present on the rock during helicoptor check. Much of the rock faces generally north. Golden eagle activity observed on the cliffs during ground check. Distance to a major river is 10-15 miles.

MANAGEMENT RECOMMENDATIONS: The site should be checked periodically for sign of falcon activity. If peregrine establishment occurs restrict road-building into Devils Punchbowl and avoid logging in the Doe Creek drainage from mid-February to late July.

DIRECTIONS TO THE SITE: From Hwy 199 take South Fork Road (G.O. Road) along the S.F. Smith River to Big Flat Station. Turn east on F.S. road 16N02 and take to 17N04 to Siskiyou Pass. Take the trail from there down into the punchbowl. Or take 17N05 from 199 just east of Cedar Rustic Campground to 17N04 to Siskiyou Pass.

ENHANCEMENT POTENTIAL: Ledge enhancement should not be necessary as ledges appear plentiful.

CONCLUDING COMMENTS: A golden eagle was observed to perch on one cliff face for 45 minutes during ground check 6/20 (see drawing).

GROUND RESULTS

SITE NAME Twin Peaks

SITE NUMBER 59

		Dates Visited
Forest Name	Six Rivers/Klamath	6/19-20/79
Aerial Photo #	35-59	
Aerial Photo Rating	A	
Quadrangle	Preston Peak	
Legal Descrip.	T17N,R4E,S25; T17N,R5E,S30	
Elevation	5900	
Cliff Height	Vertical faces up to 80' (23m)	
Cliff Aspect	N & S, also NE	
Final Classification	Potential	

PREY NOTED: Band-tailed Pigeon, Stellars Jay, Common Flicker, Robin, Flycatcher sp.

RAPTORS NOTED: None.

FEEDING HABITAT AVAILABILITY AND QUALITY: The south-facing slope of Twin Peaks is covered with thick brush. The habitat within the basin to the south (Devils Punchbowl) is mostly bare rock with mountain shrubs and groves of stunted conifers. Farther down the canyon is dense conifer forest with some hardwoods. Prey is not plentiful in immediate vicinity but should increase downslope with increased vegetative cover.

SITE RELATION TO WATER: Doe Creek flows along the south side of Twin Peaks west to east, and flows into Clear Creek two miles to the east which flows into the Klamath River 20-25 miles to the s.e. The headwaters of Siskiyou Fork of the Smith River lie on the north side of the mountain. Several lakes in Devil's Punchbowl 1.5-2 miles south.

DISTURBANCE POTENTIALS: Little or none. The site is relatively remote; the closest serviceable road is 1.5 miles to the south at Siskiyou Pass. Closest trail is ½ mile south. Steep slope and brush should discourage access by foot. There is no timber on the slope surrounding the rocks. Logging downslope on either side of the ridge could pose future disturbance, especially on the south and east side where line of sight from the rock is direct.

FACTORS FOR PEREGRINE ESTABLISHMENT: South-facing rock mass about 250 feet in height. However it is sloping with the largest vertical face only about 80 feet.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Elevation is nearly 6000 feet; snow was present on the rock during helicoptor check. The site lacks substantial vertical faces and ledges. One small face on the east side of the mountain faces n.e. There are more suitable cliffs in the area of Bear Mtn and Devil's Punchbowl (#58). Distance to nearest major rivers is 6 (M.F. Smith) and 16 (Klamath) miles.

MANAGEMENT RECOMMENDATIONS: Due to low suitability of the rock and high elevation, low priority is recommended for management and enhancement at this time. Check the site periodically for sign of raptor activity.

DIRECTIONS TO THE SITE: From Hwy 199 take South Fork Road (G.O. Road) along the South Fork of the Smith River to Big Flat Station. Turn east on F.S. road 16N02 and take 17N04 to Siskiyou Pass. The site is visible from there or hike down jeep trail for closer look. Or take 17N05 from 199 just west of Cedar Rustic Campground to 17N04 to Siskiyou Pass.

GROUND RESULTS

SITE NAME Broken Rib Mountain

SITE NUMBER 60

		Dates Visited
Forest Name	Six Rivers	
Aerial Photo #	N/A	5/31/79
Aerial Photo Rating	N/A	6/18/79
Quadrangle	Preston Peak	
Legal Descrip.	T17N,R4E,S1&12	
Elevation	5800	
Cliff Height	n. face: 250' (74m)	
Cliff Aspect	S and N-NE	
Final Classification	Unsuitable	

PREY NOTED: Mountain Chickadee, Band-tailed Pigeon, Stellars Jay, Rock Wren, Violet-green Swallow, Cedar Waxwing, Robin, Common Flicker, Blue Grouse, Nuthatch, Sparrow sp., Hummingbird sp.

RAPTORS NOTED: Red-tail Hawk.

FEEDING HABITAT AVAILABILITY AND QUALITY: The area is about two-thirds mixed coniferous forest and one-third open with low montane shrubs and talus slides and scree toward the top of Broken Rib Mountain itself. Subjectively, prey availability did not appear abundant.

SITE RELATION TO WATER: Headwaters of Middle Fork Smith River 1 mile east and north. Headwaters of Middle Fork Smith River 1 mile south. Packsaddle Creek $\frac{1}{2}$ mile west. Mainwaters of M.F. Smith River 5 miles west.

DISTURBANCE POTENTIALS: Logging has occurred to the west and north of the site within several miles and holds potential for future disturbance. Disturbance potentials are low otherwise as the site is high and remote.

FACTORS FOR PEREGRINE ESTABLISHMENT: Peregrines have been sighted in the area by F.S. personnel and Randy and Elaine Hill (USFS contractors).

FACTORS AGAINST PEREGRINE ESTABLISHMENT: High elevation. Lack of suitable rock and aspects. South exposure is very steep with some rock but it is crumbly and unconsolidated and contains no vertical faces. North exposure has good expanse of vertical rock with some ledges noted, however at this elevation the aspect is completely unsuitable. There is no visible sign of raptor activity on the mountain.

MANAGEMENT RECOMMENDATIONS: Low suitability of site for peregrine nesting (lack of suitable vertical faces and aspects) makes management here low priority.

DIRECTIONS TO THE SITE: Hwy 199 to Knopt Creek Rd. (F.S.#18N07) 6 miles n.w. of Gasquet and turn east. Turn right at #18N04 and follow to the end of the road. Walk s.w. 1.5 miles traversing the west side of Broken Rib to the south summit exposure.

ENHANCEMENT POTENTIAL: Enhancement is not recommended since the only suitable vertical rock faces north at a high elevation.

GROUND RESULTS

SITE NAME N.W. of Doctor Rock

SITE NUMBER 211

		Dates Visited
Forest Name	Six Rivers	5/30/79
Aerial Photo #	N/A	
Aerial Photo Rating	N/A	
Quadrangle	Ship Mountain	
Legal Descrip.	T13N,R3E,S1	
Elevation	4300	
Cliff Height	200' (59m)	
Cliff Aspect	NW	
Final Classification	Potential	

PREY NOTED: See Site #54.
FEEDING HABITAT AVAILABILITY AND QUALITY: See Site #54.
SITE RELATION TO WATER: See Site #54.
DISTURBANCE POTENTIALS: See Site #54.
FACTORS FOR PEREGRINE ESTABLISHMENT: Large granite mass with striking vertical faces 200' in height. Several ledges noted but their suitability for nesting is questionable (see drawing). Several spots of what appear to be old whitewash on possible perches noted about the center of the rock mass.
FACTORS AGAINST PEREGRINE ESTABLISHMENT: N.W. aspect. Very sheer face, ledges scarce. The rock is tucked in the drainage below Peak 8 to the west, lacks good effective height. High elevation.
MANAGEMENT RECOMMENDATIONS: North aspect makes the site low priority for enhancement or management efforts. However, there is possible sign of raptor activity on the rock so the site should be observed periodically for continued use; it may be a perching rock for non-nesters.
DIRECTIONS TO THE SITE: The rock lies n.w. of Doctor Rock (#54) about ½ mile. It can be viewed from the G.O. Road via a strong spotting scope, or from the trail leading to Doctor Rock. See Doctor Rock directions.
ENHANCEMENT POTENTIAL: The rock has excellent vertical cliffs. Though north-facing it is tucked down in a valley and may be sufficiently protected from the elements to permit peregrine suitability. It could be considered for enhancement but this is low priority.

APPENDIX C

A PEREGRINE FALCON NESTING HABITAT SURVEY IN THE KLAMATH NATIONAL FOREST - 1979

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HELICOPTER RESULTS

SITE NAME: MURDERER'S BAR

SITE NUMBER: 53B

DATE VISITED: 4/8/79

TOTAL SCORE: 4.25

TIME OF ARRIVAL: 1354

CLIFF SCORE: 2.25

TOTAL TIME AT SITE: 6 min.

LEDGE SCORE: 2.0

RAPTORS SEEN: Male Peregrine

GROUND VISIT: Yes

CLIFF HEIGHT: 84 m (300 ft)

STATUS: Historical/Active

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x			x	
Ledge Quality		x			x	
Ledge Location			x			x
Enhancement Potential						
Human Disturbance	x					
Overall Impression		x			x	

COMMENTS:

-Cliff about 200 ft high on Salmon River; Elevation: 1200 ft

-Fractured, whitewash, pothole, several sections of cliff

-Left side of river (south) - 300 ft cliff, lots of whitewash, used by something for a long time, nothing but a perch

-Male Peregrine Falcon seen flying on south side of Salmon River by site

-Low rating: habitat doesn't look too good; may've been used historically. That's probably why they're hanging in there

HELICOPTER RESULTS

SITE NAME: TOM PAYNE PEAK

SITE NUMBER: 53 C

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1402

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 59-74 m (200-250 ft)

TOTAL SCORE: 6.0

CLIFF SCORE: 3.0

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Historical

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			
Ledge Quality			x			
Ledge Location			x			
Enhancement Potential			x			
Human Disturbance						
Overall Impression			x			x

COMMENTS:

-Cliff very high on crest of hill, quite fractured, much like Murderer's Bar & Shelton Butte

-Central portion looks real good; first portion didn't have horizontal ledges

-Lots of whitewash; good roosting site

-No falcons visible here now

-Overall impression: Rate as a #3 - lots of potential

HELICOPTER RESULTS

SITE NAME: ROCK CREEK BUTTE

SITE NUMBER: 61

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1419

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT: * see comments

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location						
Enhancement Potential	x			x		
Human Disturbance						
Overall Impression	x			x		

COMMENTS:

-Very rubbly, no vertical faces, "wash out"

-Not even a cliff*

-4300 ft elevation

-Proximity to water: 5.5 miles

HELICOPTER RESULTS

SITE NAME: LITTLE MEDICINE MOUNTAIN

SITE NUMBER: 62

DATE VISITED: 4/8/79

TOTAL SCORE: 3.5

TIME OF ARRIVAL: 1424

CLIFF SCORE: 1.5

TOTAL TIME AT SITE: 2 min.

LEDGE SCORE: 2.0

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT:

STATUS: Potential/Pos

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x				
Ledge Quality		x				
Ledge Location		x				
Enhancement Potential		x				
Human Disturbance			x			
Overall Impression		x				

COMMENTS:

-Many very small, short cliffs, fractured all along, trees throughout extent of cliff face

-Nice rock, similar to active sites along Klamath River

-Large cliff, tilted, broken into smaller fragments

-Vertical cracking, some horizontal faces; one face on west side that looks good

-Most of the ledges are accessible - terrace effect

-Abandoned mine site

-Overall impression: rates #2, except isolated, only "potential"

-Elevation: 5000 ft; Proximity to water: 3.5 miles

HELICOPTER RESULTS

SITE NAME: SAWTOOTH MOUNTAIN

SITE NUMBER: 63

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1426

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 4.0

CLIFF SCORE: 2.0

LEDGE SCORE: 2.0

GROUND VISIT: Yes

STATUS: Pot/Pos

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability					x	
Ledge Quality					x	
Ledge Location				x	x	x
Enhancement Potential					x	
Human Disturbance						x
Overall Impression					x	

COMMENTS:

-5200-5300 elevation.

-Still in snow - falcons would have to nest late in season to use this site

-Doesn't look real promising

-Nice little cliff to south of site .25 mile

-One area on south facing side, knobular rock, but it has snow also

-Vertical fractures, some ledges, overhangs

-Semi-circular, bowl-shaped ridge, few ledges

-No sign of where bird have roosted in past

HELICOPTER RESULTS

SITE NAME: WILDERNESS FALLS

SITE NUMBER: 64

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1001

TOTAL TIME AT SITE: 5 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.5

CLIFF SCORE: 1.5

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuit/Pot

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

-5300 ft elevation

-Still in winter, temperature=30° F. at 1000 hrs.

-Some ledges

-No good foraging areas for birds

-Mostly north facing cliffs

-Only one cliff south facing

-Four or five decent sized ledges

-No sign of use

-Proximity to water: 8 miles

HELICOPTER RESULTS

SITE NAME: BLUE NOSE BLUFF/DILLON CREEK

SITE NUMBER: 65

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1432

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 14-74 m (50-250 ft)

TOTAL SCORE: 4.5

CLIFF SCORE: 2.0

LEDGE SCORE: 2.5

GROUND VISIT: Yes

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x					
Ledge Quality	x					
Ledge Location	x					
Enhancement Potential	x					
Human Disturbance			x			
Overall Impression						

COMMENTS:

-Site on Dillon Creek, low to river; cliffs interspersed with drainages, lots of vegetation, some likely ledges

-Very fractured rock, vertical in some spots, low angle (45°) cliffs mostly

-Several ledge possibilities, but most ledges sloping

-Some whitewash, no sign of perches however

-Overall impression: hard to rate this jumbled-up rock; could be a falcon in here somewhere

HELICOPTER RESULTS

SITE NAME: EL CAPITAN

SITE NUMBER: 67

DATE VISITED: 4/15/79

TOTAL SCORE: 4.5

TIME OF ARRIVAL: 0947

CLIFF SCORE: 2.0

TOTAL TIME AT SITE: 2 min.

LEDGE SCORE: 2.5

RAPTORS SEEN: None

GROUND VISIT: Yes

CLIFF HEIGHT:

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x				x
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression		x			x	

COMMENTS:

-Elevation 5400 ft

-Magnificent looking rocky peak

-Not a very vertical cliff

-Lots of ledges on south facing cliff

-Except for snow, a good cliff

-No sign of raptor use or whitewash

-Falcons would have to nest late at this site; too much snow now

HELICOPTER RESULTS

SITE NAME: BUCK RIDGE

SITE NUMBER: 67A

DATE VISITED: 4/15/79

TIME OF ARRIVAL:

TOTAL TIME AT SITE: 3.25 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 5.0

CLIFF SCORE: 2.0

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Possible/Highly Susp.

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						x
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance					x	
Overall Impression						

COMMENTS:

-Plenty of ledges available; not a bad looking cliff

-Whitewash

-Trees growing on side of cliff, mossy, moist

-Really good ledges

-South facing cliff - faces not as vertical & has no ledges

-Road down below

-Snow on slopes on side drainage

HELICOPTER RESULTS

SITE NAME: SOUTH FORK CREEK

SITE NUMBER: 67B

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 0933

TOTAL TIME AT SITE: 1.5 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 7 m (25 ft)

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x					
Ledge Quality	x					
Ledge Location	x					
Enhancement Potential	x					
Human Disturbance			x			
Overall Impression	x					

COMMENTS:

-Very marginal, unsuitable

-Not the "real" cliff

-No good ledges

-No potential

-Elevation: 3200 ft

-Proximity to water: 1 mile

HELICOPTER RESULTS

SITE NAME: LITTLE BUCK RIDGE

SITE NUMBER: 67C

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 0934

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability				x		
Ledge Quality				x		
Ledge Location						
Enhancement Potential						
Human Disturbance				x		
Overall Impression						

COMMENTS:

-Elevation about 3500 ft.

-One cliff face, no ledges

-Clearcut patches & gravel road with farmhouse; high human disturbance

-Habitat: predominately Douglas Fir

-Proximity to water: 2 miles

HELICOPTER RESULTS

SITE NAME: FOURMILE BUTTE

SITE NUMBER: 68

DATE VISITED: 4/15/79

TOTAL SCORE: 2.0

TIME OF ARRIVAL: 1127

CLIFF SCORE: 1.0

TOTAL TIME AT SITE: 5 min.

LEDGE SCORE: 1.0

RAPTORS SEEN: Sub-adult Golden Eagle

GROUND VISIT: No

CLIFF HEIGHT:

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

-Elevation: 5400 ft

-Proximity to water: 3.5 miles

-Human Disturbance: burn nearby

HELICOPTER RESULTS

SITE NAME: MEDICINE MOUNTAIN

SITE NUMBER: 68A

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1450

TOTAL TIME AT SITE: 3 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 3.0

CLIFF SCORE: 2.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Pot/Unsuit

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

-Lookout on top

-Southeast facing cliff

-Two or three ledges; lots of snow

-Looks like a good site for Golden Eagles, but prey could well be sparse.

-Elevation = 6800 Ft. -too high

-Proximity to water: 2 miles

HELICOPTER RESULTS

SITE NAME: LOWER DEVIL'S PEAK

SITE NUMBER: 69

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1253

TOTAL TIME AT SITE: 5 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 59 m (200 ft)

TOTAL SCORE: 6.0

CLIFF SCORE: 3.0

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Possible/Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential			x			x
Human Disturbance						
Overall Impression			x			x

COMMENTS:

-Elevation - 4,000 ft

-Several cliffs in the area, whole area is massive; so large that it looks like Burnt Ranch; also looks like Castle Ranch on the Yukon River in Alaska

-Metamorphic rock with white granite scattered in it

-Bowl area, faces south to west, ledge faces are short, but many ledges present, great potential

-Commanding view of river, steep drainages

-Site could be modified very well with a ledge

-Site definitely needs a ground check

HELICOPTER RESULTS

SITE NAME: COTTONWOOD CREEK

SITE NUMBER: 70

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1621

TOTAL TIME AT SITE: 1 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 22 m (75 ft)

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location						
Enhancement Potential	x			x		
Human Disturbance						
Overall Impression	x			x		

COMMENTS:

-Series of small, volcanic-looking bluffs, 75 ft tall

-Two levels, two plateaus

-All vertical cracking; no horizontal ledges

-One small bit of whitewash

-Doesn't merit ground checking; doesn't look suitable for peregrines

-Elevation: 3500 ft

-Proximity to water: 1 mile (to creek), 11 miles to river

HELICOPTER RESULTS

SITE NAME: COTTONWOOD PEAK

SITE NUMBER: 71

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1805

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability				x		
Ledge Quality				x		
Ledge Location						
Enhancement Potential						
Human Disturbance						x
Overall Impression				x		

COMMENTS:

-Upthrusted dike along the crest of a ridge

-Real short cliff, unimpressive

-Doesn't look promising at this stage

-Doesn't merit ground checking

-Elevation: 4200 ft

-Proximity to water: 4 miles

HELICOPTER RESULTS

SITE NAME: RIVERVIEW

SITE NUMBER: 71A

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1801

TOTAL TIME AT SITE: 1 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location	x			x		
Enhancement Potential	x			x		
Human Disturbance						
Overall Impression	x			x		

COMMENTS:

-Rather poor cliff

--Very small cliff

-A few grassy ledges that bobcats could reach

-Not worth ground checking

-Overall impression: #1 cliff rating

-Elevation: 4550 ft

-Proximity to water: 1 mile

HELICOPTER RESULTS

SITE NAME: CAYUSE GULCH & LIME GULCH

SITE NUMBER: 71 B & C

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1808

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 22-30 m (75-100 ft)

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuit/Pot

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location	x					
Enhancement Potential	x					
Human Disturbance			x			x
Overall Impression	x					

COMMENTS:

-Both Cayuse & Lime Gulch are small rocks that stick up like pinnacles

-Can't be more than 100 ft high

-Rocks look more like Prairie Falcon sites than Peregrine Falcon sites

-Judge as a #1 site

-Some roosting sites, however; a little orange whitewash

-No eyrie

-Elevation: 3400 ft (B) , 3200 ft (C)

-Proximity to water: 2 miles (for both)

HELICOPTER RESULTS

SITE NAME: EAST OF KLAMATH RIVER

SITE NUMBER: 72

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1752

TOTAL TIME AT SITE: 2.5 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 3.0

CLIFF SCORE: 1.5

LEDGE SCORE: 1.5

GROUND VISIT: No

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x		x		
Ledge Quality		x		x		
Ledge Location						
Enhancement Potential		x		x		
Human Disturbance						
Overall Impression		x		x		

COMMENTS:

-Nothing on west facing cliff , just a series of little boulders

-Not very vertical, no whitewash

-Not worth ground checking

-Elevation: 3600 ft

-Proximity to water: 1 mile

HELICOPTER RESULTS

SITE NAME: VESA CREEK

SITE NUMBER: 72A

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1455

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 18-72 m (60-250 ft)

TOTAL SCORE: 5.0

CLIFF SCORE: 3.0

LEDGE SCORE: 2.0

GROUND VISIT: Yes

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability					x	
Ledge Quality					x	
Ledge Location						
Enhancement Potential						
Human Disturbance					x	
Overall Impression					x	

COMMENTS:

-Vertical faces that vary in height from 60-70 ft to 200-250 ft

-Granitic cliff, good ledges, cliffs 300-400 ft

-Burn near site

-Overlooks drainage

HELICOPTER RESULTS

SITE NAME: HAYSTACK BUTTE

SITE NUMBER: 73

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1316

TOTAL TIME AT SITE: 1.0 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 14 m (50 ft)

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location						
Enhancement Potential	x			x		
Human Disturbance			x			
Overall Impression	x			x		

COMMENTS:

-Short cliffs, only 25-50 ft, along a ridgetop

-Not a very good site; no ledges or whitewash

-Unsuitable cliff

-Elevation: 4000 ft

-Proximity to water: 3 miles

HELICOPTER RESULTS

SITE NAME: SOUTH OF SCOTT BAR/SCOTT RIVER

SITE NUMBER: 74A

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1317

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 12-14 m (40-50 ft)

TOTAL SCORE: *

CLIFF SCORE: *

LEDGE SCORE: *

GROUND VISIT: Yes

STATUS: *

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

* No analysis

-Recommended for ground check

-Much of cliff on north side of Scott River is like SmithRiver/ Gasquet site.

-Very, very short cliffs, angular, not vertical, yet overlooks major river

HELICOPTER RESULTS

SITE NAME: INDIAN SCOTTY

SITE NUMBER: 76

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1345

TOTAL TIME AT SITE: 9 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 297 m (1000 ft)

TOTAL SCORE: 6.0

CLIFF SCORE: 3.0

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Highly Suspected

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality			x			x
Ledge Location			x			x
Enhancement Potential			x			x
Human Disturbance		x	-		x	
Overall Impression			x			x

COMMENTS:

-A mile's worth of cliff to look at

-This area is good: valley, river, pond, excellent cliff

-Many ledges; rate as a #3 all around

-West face best, many ledges, whitewash area below (perch)

-One of the better sites we've seen; best site for enhancement I've seen. Good height over river-pond near,prey productivity probably high

-Recommendation: put in a ledge where whitewash was on west face

-Should be ground checked

-Remote, one road nearby

HELICOPTER RESULTS

SITE NAME: WHISKEY BUTTE

SITE NUMBER: 77

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1405

TOTAL TIME AT SITE: 1 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location						
Enhancement Potential	x			x		
Human Disturbance						
Overall Impression	x			x		

COMMENTS:

-What cliffs there are, are totally snow-covered

-South-facing cliff looks nice

-Very little vertical rock, trees, now whitewash visible whatsoever

-Uplifted cliffs, fractured at a 45° angle, no ledges

-High elevation, marginal site

-Elevation: 7000 ft

-Proximity to water: 5 miles

HELICOPTER RESULTS

SITE NAME: SNOOZER RIDGE

SITE NUMBER: 78

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1410

TOTAL TIME AT SITE: 1 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x					
Ledge Quality	x					
Ledge Location	x					
Enhancement Potential	x					
Human Disturbance						
Overall Impression	x					

COMMENTS:

-Uplifted portion of the mountain ridge, cliffs aren't very bigh, jumbled up mass of rocks sticking up

-West facing slope very short, only one cliff face here

-#1 rating all around; not worth ground checking

-Lots of snow mixed in here

-Elevation: 4700 ft

-Proximity to water: 2 miles

HELICOPTER RESULTS

SITE NAME: FLOWER GULCH

SITE NUMBER: 78B

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1418

TOTAL TIME AT SITE: fly by

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location						
Enhancement Potential	x			x		
Human Disturbance						
Overall Impression	x			x		

COMMENTS:

-Granite rock basin, low relief

-Really no ledges

-Very steep

-Broken slopes, not very vertical, sloping, much more extensive than Signal Peaks

-Short natured

-Not worth ground checking

-Elevation: 4500 ft

-Proximity to water: 3.5 miles

HELICOPTER RESULTS

SITE NAME: RIGHT HAND FORK

SITE NUMBER: 79

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1423

TOTAL TIME AT SITE: 1 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x					
Ledge Quality	x					
Ledge Location	x					
Enhancement Potential	x					
Human Disturbance						
Overall Impression	x					

COMMENTS:

-Cliff on upper canyon side not worth looking at, all shale

-No vertical face at all

-Looks good from a distance; maybe that's why it was selected (from aerial photos)

-Jumbled up rock; not worth ground checking

-Elevation: 4500 ft

-Proximity to water: 3 miles

HELICOPTER RESULTS

SITE NAME: NORTH FORK (NORTH OF SAWYER'S BAR)

SITE NUMBER: 80

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1437

TOTAL TIME AT SITE: 1 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 9-22 m (30-70 ft)

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location	x			x		
Enhancement Potential	x			x		
Human Disturbance						
Overall Impression	x			x		

COMMENTS:

-Small cliff

-Rocky, not vertical

-Very short, no ledges

-Rating: #1

-Not worth rechecking

-Elevation: 4500 ft

-Proximity to water: 3 miles

HELICOPTER RESULTS

SITE NAME: SMITH RIDGE (LITTLE NORTH FORK)

SITE NUMBER: 81

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1438

TOTAL TIME AT SITE: fly by

RAPTORS SEEN: None

CLIFF HEIGHT: 30 m (100 ft)

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x					
Ledge Quality	x					
Ledge Location						
Enhancement Potential	x					
Human Disturbance						
Overall Impression	x					

COMMENTS:

-Another little cliff here, nothing vertical

-Nothing here, #1 site

-Terrible cliff

-Elevation: 2400 ft

-Proximity to water: 1 mile

HELICOPTER RESULTS

SITE NAME: SOUTH OF CRAPPO MOUNTAIN

SITE NUMBER: 82

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1439

TOTAL TIME AT SITE: fly by

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location						
Enhancement Potential	x			x		
Human Disturbance						
Overall Impression	x			x		

COMMENTS:

-Very short, not vertical

-A "dud"

-Elevation: 6200 ft

-Proximity to water: 1.5 miles

HELICOPTER RESULTS

SITE NAME: FONG WAH BAR

SITE NUMBER: 83 B

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1446

TOTAL TIME AT SITE: fly by

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location						
Enhancement Potential	x			x		
Human Disturbance						
Overall Impression	x			x		

COMMENTS:

-Cut bank along river & cliff above

-No good

-Totally unsuitable

-Elevation: 1800 ft

-Proximity to water: on river

HELICOPTER RESULTS

SITE NAME: BONALLY/FORKS OF SALMON

SITE NUMBER: 83C

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1441

TOTAL TIME AT SITE: fly by

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location						
Enhancement Potential	x			x		
Human Disturbance						
Overall Impression	x			x		

COMMENTS:

-Dud

-Elevation: 1400 ft

-Proximity to water: right on river

HELICOPTER RESULTS

SITE NAME: MISSOURI BAR/FORKS OF SALMON

SITE NUMBER: 83D

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1442

TOTAL TIME AT SITE: fly by

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location						
Enhancement Potential	x			x		
Human Disturbance						
Overall Impression	x			x		

COMMENTS:

-"Zilch"

-Elevation: 1360 ft

-Proximity to water: right on river

HELICOPTER RESULTS

SITE NAME: KNOWNOTHING CREEK A

SITE NUMBER: 84

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1642

TOTAL TIME AT SITE: 2.5 min.

RAPTORS SEEN: male Peregrine

CLIFF HEIGHT: 35 m (120 ft)

TOTAL SCORE: 5.0

CLIFF SCORE: 2.0-2.5

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Active

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality		x	x			x
Ledge Location		x	x		x	x
Enhancement Potential						
Human Disturbance	x			x		
Overall Impression		x	x			x

COMMENTS:

-Ledges, lots of whitewash

-Overhang

-Male peregrine on a kill (pigeon) on the cliff

-Peregrine flew off cliff, flew around, and returned to perch on edge of cliff; he's acting like a territorial bird

-Human Disturbance: mining, road

-Site will be easy to ground check since there's a road right to the bottom

-Brand new site

HELICOPTER RESULTS

SITE NAME: CECILVILLE

SITE NUMBER: 86

DATE VISITED: 4/14/79

TOTAL SCORE: 6.0

TIME OF ARRIVAL: 1529

CLIFF SCORE: 3.0

TOTAL TIME AT SITE: 5 min.

LEDGE SCORE: 3.0

RAPTORS SEEN: Red-tailed Hawk

GROUND VISIT: Yes

CLIFF HEIGHT: 29 m (100 ft)

STATUS: Historical

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality			x			x
Ledge Location						
Enhancement Potential						
Human Disturbance		x			x	
Overall Impression			x			x

COMMENTS:

-Down the Salmon River from Cecilville, south side of river

-Red-tailed Hawk flying around; lots of Band-tailed Pigeons

-Limestone bluffs, cliff about 100 ft, lots of ledges, lots of whitewash

-Rating: #3 all around (except human disturbance)

-Historical: pair of Peregrine Falcons observed with a kill in cliff area in June 1975 (S. & J. Boyce)

-No peregrines observed, definitely check by ground

-Road is the only bad aspect

HELICOPTER RESULTS

SITE NAME: GIBSON GULCH

SITE NUMBER: 87

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1540

TOTAL TIME AT SITE: .5 min

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location						
Enhancement Potential	x			x		
Human Disturbance						
Overall Impression	x			x		

COMMENTS:

-Band-tailed Pigeons abundant

-Nothing there

-#1 all around

-Elevation: 3000 ft

-Proximity to water: 1 mile

HELICOPTER RESULTS

SITE NAME: I AM UP RIDGE

SITE NUMBER: 88

DATE VISITED: 4/15/79

TIME OF ARRIVAL: 1543

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE:

CLIFF SCORE: 1.5

LEDGE SCORE:

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

-Whole series of little cliffs - looks like limestone

-West part - not worth coming back & checking

-Elevation: 6800 ft

-Proximity to water: 1.5 miles

HELICOPTER RESULTS

SITE NAME: WILDCAT PEAK

SITE NUMBER: 88B

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1552

TOTAL TIME AT SITE: 1.75

RAPTORS SEEN: None

CLIFF HEIGHT: 35 m (120 Ft)

TOTAL SCORE: 2.5

CLIFF SCORE: 1.5

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuit/Pot

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x				x	
Ledge Quality	x			x		
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression	x					

COMMENTS:

-Several ledges

-Not worth coming back to check

-Elevation: 7100 ft

-Proximity to water: 5.5 miles

HELICOPTER RESULTS

SITE NAME: BOLIVAR LOOKOUT

SITE NUMBER: 89

DATE VISITED: 4/14/79

TOTAL SCORE: 3.0

TIME OF ARRIVAL: 1555

CLIFF SCORE: 1.5

TOTAL TIME AT SITE: 6 min.

LEDGE SCORE: 1.5

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT:

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x				x	
Ledge Quality	x				x	
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression	x					

COMMENTS:

-North side very broken, sloping cliffs; nothing vertical

-East side has some ledges, whitewash

-Pretty nice little cliff, but it doesn't merit looking at again

-Rate this about a #1

-Elevation: 7000 ft

-Proximity to water: 2 miles

HELICOPTER RESULTS

SITE NAME: HAYDEN RIDGE

SITE NUMBER: 90

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1612

TOTAL TIME AT SITE: 13 min.

RAPTORS SEEN: Prairie Falcon

CLIFF HEIGHT: 29-59 m (100-200 ft)

TOTAL SCORE: 4.25

CLIFF SCORE: 2.0

LEDGE SCORE: 2.25

GROUND VISIT: Yes

STATUS: Possible

(Active: Prairie Falcons) 1979

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		X			X	
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression		X			X	

COMMENTS:

-200 ft cliff, 100 ft is vertical

-Very crumbly

-A couple nice ledges, should be prairies here

-300-400 ft cliffs, in sections of 100-150 ft at a time

-Some whitewash areas

-No real good ledges

-Looks like a good Prairie Falcon cliff

-Single Prairie Falcon flew off lower end

HELICOPTER RESULTS

SITE NAME: LOVER'S LEAP

SITE NUMBER: 91

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1604

TOTAL TIME AT SITE: 5 min.

RAPTORS SEEN: Prairie Falcon

CLIFF HEIGHT: 18-44 m (60-150 ft)

TOTAL SCORE: 6.0

CLIFF SCORE: 3.0

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Possible
(Historical & Active- Prairie Falcons- 1979)

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			X			X
Ledge Quality			X			X
Ledge Location			X			X
Enhancement Potential						
Human Disturbance						
Overall Impression			X			X

COMMENTS:

-East side of Lover's Leap: 1 ledge, pothole, no whitewash

-Nothing over 60 ft, oaks, more ledges, vertical faces

-Beautiful little spot overlooks valley, meadow, stream

-Couple of nice potholes, lots of ledges, good quality, plenty of whitewash

-Band-tailed Pigeon flushed

-Particularly attractive setting - #3 all around - 150 ft cliff

-Prairie Falcon flew off

HELICOPTER RESULTS

SITE NAME: ANTELOPE CREEK (GOOSENEST DISTRICT)

SITE NUMBER: 207

DATE VISITED: 4/13/79

TIME OF ARRIVAL: 1558

TOTAL TIME AT SITE: 2.5 min.

RAPTORS SEEN: Prairie Falcon

CLIFF HEIGHT: 44 m (150 ft)

TOTAL SCORE: 5.5

CLIFF SCORE: 2.5

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Possible

*Excellent for Peregrines, if Prairies weren't using site

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality			x			x
Ledge Location		x	x		x	x
Enhancement Potential						
Human Disturbance		x			x	
Overall Impression			x			x

COMMENTS:

-Elevation: ~6500 ft, pine habitat, metamorphic rock

-Small cliff facing south, west-facing bluff 150 ft high- not very good, 45° angle, easily climbed by carnivorous mammals

-Next section: vertical cliff, high ledge potential, no whitewash

-Eastern-most cliff: some ledges, perch site, whitewash, excellent cliff height-wise, rather smooth rock - no potholes

-Prairie Falcon tiercel flew off of east end of cliff

-Overlooks Antelope Creek

GROUND RESULTS

SITE NAME Murderer's Bar

SITE NUMBER 53B

		Dates Visited
Forest Name	Klamath	5/16/79
Aerial Photo #	26-83	5/17-18/79
Aerial Photo Rating	C	5/27/79
Quadrangle	Forks of Salmon	5/29/79
Legal Descrip.	T11N,R7E,S6	
Elevation	800	
Cliff Height	200-250' (59-74m)	
Cliff Aspect	NW & S	
Final Classification	Historical/Active	

PREY NOTED: Band-tailed Pigeon, Mourning Dove, Tree Swallow, Violet-green Swallow, Black-headed Grosbeak, Western Tanager, MacGillivray's Warbler, Stellars Jay, Lark Bunting, Robin, Black-headed Grosbeak observed as prey.

RAPTORS NOTED: Turkey Vulture, Osprey, Raven, pair Peregrine Falcons.

FEEDING HABITAT AVAILABILITY AND QUALITY: Both diversity and abundance of avifauna appear high. Several habitats to choose from. Ridges and canyons present. The canyons are major flight paths for band-tail pigeons (especially fall-early spring). Band-tails are viewed as important to all the sites nearby (#'s 53A, 53C, 84, 86).

SITE RELATION TO WATER: Both known nesting cliffs border the Salmon River and are 300-400 feet vertical above river. Confluence of Salmon and Wooley Creek just to east of site.

DISTURBANCE POTENTIALS: Moderate to High. Campers and logging trucks may cause disturbance, although the resident pair does not seem bothered by noise or people. Site is fairly well-known among falconers, but these persons have not harmed the falcons in recent years. One such falconer has provided Wenzel with useful observations of the site. Falcon guard Helen Thompson reports many people using M.B. vicinity, but showing no apparent disturbance or awareness of the site.

FACTORS FOR PEREGRINE ESTABLISHMENT: Cliff has been observed since 1969- a pair was present but failed in 1972 and another pair was not observed until 1975 (Wenzel). Can be considered a re-occupation site. A magnet cliff to any peregrine flying down the Salmon. Presently active. There are two cliffs--the north cliff is considered by many to be a marginal nesting cliff; the south one is considered excellent by Wenzel.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: None, with the possible exception of human activity nearby.

MANAGEMENT RECOMMENDATIONS: Continue yearly observations of site. Control road work in area from mid-January to post-fledging, especially if the falcons choose the north cliff. Do not apply herbicides within 5 miles of site unless it can be proven harmless to falcons and/or prey. Eyrie should be climbed whenever possible to collect data on eggshell quality, prey, eyrie dimensions, and pesticides. Retain the falcon guard for at least the next two years.

DIRECTIONS TO THE SITE: From St. Rt. 96 proceed east on Salmon River road approximately 3 miles to point where road crosses north side

of river to south side. Observing in morning light is difficult.

ENHANCEMENT POTENTIAL: Enhancement is not recommended as present ledge availability is adequate.

CONCLUDING COMMENTS: The site is active for peregrines in 1979. 2 young confirmed in eyrie 5/27 and 5/29; at least one of these is a female. Eyrie is a grassy ledge to left of white colored part of face on south cliff. This same ledge has been used in a prior year, it is also located 20 feet above a prior used tree root eyrie (Wenzel). Nesting is confirmed by Wenzel only on south cliff, though nesting was reported on north cliff in 1978. A 3rd peregrine adult was observed in the vicinity on 5/29/79.

GROUND RESULTS

SITE NAME Tom Payne Peak

SITE NUMBER 53C

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	25-219	6/7/79
Aerial Photo Rating	C	
Quadrangle	Forks of Salmon	
Legal Descrip.	T11N,R7E,S3,4	
Elevation	5098	
Cliff Height	observed cliff: 150' (44m)	
Cliff Aspect	W	
Final Classification	Highly Suspected	

PREY NOTED: Stellars Jay, Blue Grouse, Western Tanager, Common Flicker, Pileated Woodpecker, Robin, Band-tailed Pigeons, Flycatcher species, Mountain Quail.

RAPTORS: Sharp-shin Hawk, Goshawk, Peregrine Falcons heard, Common Raven.

FEEDING HABITAT AVAILABILITY AND QUALITY: Excellent. Ridgetops available. Salmon River canyon. Avifauna subjectively diverse and abundant. Wide elevational habitat choices.

SITE RELATION TO WATER: Less than 2 miles horizontal to the Salmon River. Tom Payne Creek originates near cliffs.

DISTURBANCE POTENTIALS: The trail into Marble Mountains wilderness passes within 1/4 mile of the site (and in view). A particularly defensive pair could be disturbed by hikers, but this disturbance factor is considered low. U.S.F.S. trail crews working in the area could also disturb the birds; this is considered low-moderate disturbance potential, but should be avoided February through post-fledging.

FACTORS FOR PEREGRINE ESTABLISHMENT: Peregrines observed copulating and territorial in 1978 (Randy & Elaine Hill). Adult peregrines heard vocalizing in 1979. Cliffs are extensive in area (similar to Shelton Butte but not as easily observed). One cliff observed in particular is considered to be suitable for peregrine nesting; it has a west aspect, is limestone, and is approx. 150' vertical; ledges appear marginal, however due to observational difficulty a suitable ledge could have been missed. Good prey base.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Possible shortage of suitable nesting ledges on observed cliffs. Unconfirmed nesting status in 1978 and 1979.

MANAGEMENT RECOMMENDATIONS: Observe site in future years to determine occupancy and success. Contact Randy and Elaine Hill to determine where exactly they saw copulation, which cliffs and which ledges if any were being used by the birds. Logging should not be allowed in the immediate vicinity of the cliffs (±1/2 mile). Upon confirmation of a nesting pair, logging and application of herbicides should be closely monitored and managed. If no pair is confirmed within the next several years and an eyrie located, consider ledge enhancement of the site.

DIRECTIONS TO THE SITE: Take Steinacher Creek road and follow to end. Cliffs are observable from here, but marginally so. Walk up trail towards Crapo Meadows, Steinacher Lake, etc. for 1.5-2 miles (and 1000' vertical). View from side of trail in any of several locations.

ENHANCEMENT POTENTIAL: Ledge enhancement, on cliffs observed on ground check, could best be achieved on the main cliff east of Tom Payne Creek, on the main face below a prominent pine tree (can be located on photos). See Management Recommendations.

CONCLUDING COMMENTS: One adult peregrine was heard vocalizing during ground check. Dave Harlow (USFWS) and Ron Escano (USFS) heard two adults vocalizing during ground check in mid-June. However, nesting status was not confirmed. Due to extensive nature of cliffs and difficulty of observation, a pair could have been missed. Observations concentrated on the western aspect cliffs located on the east side of Tom Payne Creek. There is more cliff area farther down the mountain which is not easily observed on the ground.

GROUND RESULTS

SITE NAME Sawtooth Mountain

SITE NUMBER 63

		Dates Visited
Forest Name	Klamath/Six Rivers	
Aerial Photo #	35-41	6/21-22/79
Aerial Photo Rating	A	
Quadrangle	Dillon Mountain	
Legal Descrip.	T14N R4E,S10	
Elevation	5700	
Cliff Height	25-50 (7-15m)	
Cliff Aspect	S, E, N	
Final Classification	Potential	

PREY NOTED: Band-tailed Pigeon, Stellars Jay, Robin, Common Flicker, several small songbirds not identified.

RAPTORS NOTED: Red-tailed Hawk.

FEEDING HABITAT AVAILABILITY AND QUALITY: The southern slope below the rocks is chaparral, turning into coniferous forest down the drainage on the north slopes. Subjectively, prey availability is adequate to good.

SITE RELATION TO WATER: Site contains the headwaters of Dillon Creek on east side, which flows s.e. about 14 miles to the Klamath River. The Klamath is about 9 air miles to the s.e. There are several small

ponds in the basin south of Sawtooth.

DISTURBANCE POTENTIALS: The site is presently remote. One road to the area ends at Chimney rock over a mile from Sawtooth and is very rough. Low disturbance potential from hikers on the trail along east side of ridge. However, proposed G.O. Road construction would put a paved road very near to the site, and open the area to future logging.

FACTORS FOR PEREGRINE ESTABLISHMENT: There is some suitable rock above a basin on the north side of Chimney Rock, a few impressive faces with ledges noted, some east aspect. One face on the southeast side of the basin is particularly impressive but lacks apparent ledges.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Sawtooth itself has south-facing rock but it lacks substantial vertical faces. No evidence of recent raptor activity noted. The site is over 5000' in elevation. Much of the rock above basin to south of Sawtooth, north of Chimney, faces n.e. and north but is otherwise more suitable then Sawtooth.

MANAGEMENT RECOMMENDATIONS: Low priority for yearly observation or enhancement.

DIRECTIONS TO THE SITE: Take the G.O. Road to Chimney Rock. Cliffs are visible from the north side of Chimney Rock via a good spotting scope, preferably a Celestron or Questar. Hike the trail from Chimney along the east side of Sawtooth for closer look.

ENHANCEMENT POTENTIAL: The most suitable vertical face, on s.e. side of basin south of Sawtooth, lacks ledges but has a large overhang on its s.e. corner which might accommodate artificial enhancement. There is one face on Chimney Rock with east aspect, about 100 feet in height with good overhang in center; this could be enhanced. These however are low priority because the cliffs occur next to where planned extension of the G.O. road would go.

GROUND RESULTS

SITE NAME Blue Nose Bluff/Dillon Creek

SITE NUMBER 65

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	22-40	5/17/79
Aerial Photo Rating	B	6/15/79
Quadrangle	Dillon Mtn.	
Legal Descrip.	T14N,R5E,S25	
Elevation	1200	
Cliff Height	125' (37m)	
Cliff Aspect	most suitable cliff: S	
Final Classification	Possible	

PREY NOTED: Band-tailed Pigeon, Mourning Dove, Tree Swallow, Violet-green Swallow, Black-headed Grosbeak, Western Tanager, MacGillvray's

Warbler, Stellars Jay, Lark Bunting, American Robin, Scrub Jay, Dark-eyed Junco, Mountain Quail.

RAPTORS NOTED: Red-tail Hawk, Kestral.

FEEDING HABITAT AVAILABILITY AND QUALITY: Habitat is mixed hardwood/coniferous forest with clear-cut areas of chest high shrubs and regrowth.

SITE RELATION TO WATER: Dillon Creek flows between the cliffs from west to east, emptying into the Klamath about two miles to the east. It is a substantial stream forming a steep canyon.

DISTURBANCE POTENTIALS: This is a heavy logging area. There is logging occuring presently but not near enough to the site to cause much disturbance. Any timber harvest done close to the cliffs would also be above them as they lie close to the creek, being especially disturbing. A campground exists two miles or less from the cliffs, but rugged terrain discourages foot travel near the cliffs.

FACTORS FOR PEREGRINE ESTABLISHMENT: South-facing cliff seventeen miles from a known active site (#53B). Close to a major river. Ledges present.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: There are a number of rocks in the area (see drawing). The most suitable is a south-facing cliff closest to the creek, and it is a marginal nesting cliff due to smallness and low effective height. The remaining rocks lack substantial vertical faces.

MANAGEMENT RECOMMENDATIONS: Observe cliffs early in spring for falcon occupation. Avoid logging on slopes above cliffs during breeding season, especially if establisment by falcons occurs. Low priority for management considerations.

DIRECTIONS TO THE SITE: Trail shown north of creek on map is non-existent. Take Rt. 96 north from Orleans and turn left 1/4 mi south of campground onto F.S. road 14N21. Turn right at 13N35 and follow to top of ridge overlooking Dillon Creek. Hike from road through clear-cut about 1/4 mile to view of cliffs.

ENHANCEMENT POTENTIAL: This is a low priority site for enhancement because ledges are present and the rock has low suitability.

GROUND RESULTS

SITE NAME Marble Mountain/Black Mountain

SITE NUMBER 66

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	47-169,191	6/30-7/1/79
Aerial Photo Rating	A	
Quadrangle	Scott Bar	
Legal Descrip.	T43N,R12E,S15&22	
Elevation	6400	
Cliff Height	100-300' (30-88m)	
Cliff Aspect	S-SE	
Final Classification	Possible	

PREY NOTED: Robin (most numerous), Stellars Jay, Common Flicker, Western Tanager, Dark-eyed Junco, Grouse sp., Flycatcher sp., Chickadee sp. heard.

RAPTORS NOTED: Red-tailed Hawk, Goshawks observed at Shackleford Falls and Log Lake, Osprey observed at Summit Lake.

FEEDING HABITAT AVAILABILITY AND QUALITY: The habitat is mixed coniferous forest with grassy meadows and open areas of mountain shrubs and manzanita.

SITE RELATION TO WATER: Springs and small creeks are abundant in the area. There are seven lakes within a two mile radius. The Wooley Creek drainage is three miles to the south.

DISTURBANCE POTENTIALS: The site is located inside the Marble Mtn. Wilderness Area. Disturbance potential is confined to heavy backpacker use of the area, especially after the first week of June. There are numerous trails in the area, two that pass right below the cliffs.

FACTORS FOR PEREGRINE ESTABLISHMENT: The cliffs are high and dominant on the landscape (Marble is white in color, Black Mtn. is black) and can be seen for many miles. They are south-southwest facing with substantial vertical faces (100-300 feet in height). Several positive ledges were noted (see drawing), the best being on Marble Mtn. There is heavy horizontal fracturing to the Marble Mtn. rock which indicates that other ledges may be present.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Extremely high elevation (6400 feet). There were still patches of snow on the south exposure of Black Mtn. during ground check in late June.

MANAGEMENT RECOMMENDATIONS: The Wilderness Ranger on duty in the area should be instructed to keep an eye open for peregrines at Marble and Black Mtn. as well as other cliff areas in his patrol. The site should be checked each spring for sign of peregrine activity. Because it is located in a wilderness area, management requirements are slight.

DIRECTIONS TO THE SITE: From Scott Bar take Scott Bar Road south to Indian Scotty Campground. Take F.S. road 44N45 and then 43N45 to Lovers Camp. Here a trail to Marble Mtn. area begins.

ENHANCEMENT POTENTIAL: Heavy horizontal fracturing on Marble Mtn. makes ledge and enhancement possibilities good. Vertical fractures on Black Mtn. (which does not show good ledge development) may accomodate an artificial structure. Overall this is a low priority site for enhancement due to very high elevation.

GROUND RESULTS

SITE NAME El Capitan

SITE NUMBER 67

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	36-180	6/18-19/79
Aerial Photo Rating	A	
Quadrangle	Preston Peak	
Legal Descrip.	T17N,R6E,S13&14	
Elevation	app. 6200	
Cliff Height	200-300' (59-88m)	
Cliff Aspect	S & SE	
Final Classification	Possible	

PREY NOTED: Band-tailed Pigeon, Stellars Jay, Common Flicker, Robin, Dark-eyed Junco, Flycatcher sp.

RAPTORS NOTED: Redtail Hawk perched in snag at Cyclone Gap, Goshawk adult observed below cliffs.

FEEDING HABITAT AVAILABILITY AND QUALITY: Upper part of the drainage on north-facing slopes is mature coniferous forest. The southern slopes tend to be open and covered in bearberry and other low-growing shrubs, talus slides below the cliffs. Subjectively, prey was not abundant but is adequate, probably increasing downstream and at lower elevations around Indian Creek.

SITE RELATION TO WATER: The cliffs overlook the headwaters of Copper Creek, which flows west to east to Indian Creek 3.5 miles. Indian Creek enters the Klamath at Happy Camp 16 miles s.e. (12 air miles). Two lakes are within 1-2 miles.

DISTURBANCE POTENTIALS: Low for the present. The site is at a high elevation and relatively remote. A foot trail follows Copper Creek within 1/2 mile of the cliffs but they are well protected by steepness and vertical height. There is marketable timber on the north slopes opposite the site along Copper Creek, however the nearest access roads are two miles away, at Young's Valley 2 miles n.w. and at Elk Lick 2 miles s.e. These roads could be relatively easily extended for logging access.

FACTORS FOR PEREGRINE ESTABLISHMENT: High, dominant rock mass with vertical faces up to 300 feet. Southern aspect. Suitable ledges are present (see) drawing). Rock is vertical and consolidated, very suitable.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: High elevation.

MANAGEMENT RECOMMENDATIONS: Check site each year for occupation. The use of heavy equipment (i.e. logging, road construction, mining) should be avoided in the drainage below and within sight of the cliffs during the spring months, should be prohibited if peregrine establishment occurs from late February to late July.

DIRECTIONS TO THE SITE: From Highway 199, 2 miles north of Horse Flat, take F.S. road 18N07 east to Young's Valley. Hike down jeep trail toward Cyclone Gap to foot trail. Take trail 1-1/2 miles east to view of cliffs. Vehicular access to trailhead if 4WD.

ENHANCEMENT POTENTIAL: Cracks and fissures are present which should accomodate artificial structures; enhancement would be difficult, however, due to difficulty of access to the top of the cliffs. Low priority for enhancement due to high elevation and existing ledges.

GROUND RESULTS

SITE NAME Buck Ridge/South Fork Indian Creek

SITE NUMBER 67A

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	22-150	5/17/79
Aerial Photo Rating	B	
Quadrangle	Happy Camp	
Legal Descrip.	T17N,R6E,S11	
Elevation	2000	
Cliff Height	25-75' (7-22m)	
Cliff Aspect	S	
Final Classification	Possible	

PREY NOTED: Robin, Black-throated grey Warbler, Vireo sp., Western Tanager, Black-headed Grosbeak, Flycatcher species. Prey is adequate.

FEEDING HABITAT AVAILABILITY AND QUALITY: Not noted.
SITE RELATION TO WATER: Located adjacent to South Fork of Indian Creek. Indian Creek is located 3 miles due east.
DISTURBANCE POTENTIALS: Three residences nearby. Cliff is located about 1/4-1/2 mile away from these but with adequate vertical protection to minimize disturbance.
FACTORS FOR PEREGRINE ESTABLISHMENT: Ledges present.
FACTORS AGAINST PEREGRINE ESTABLISHMENT: Cliff is small, 25-75 feet maximum in height. Appears only marginally suitable for either falcon species (prairie or peregrine).
MANAGEMENT RECOMMENDATIONS: Low priority for management.
DIRECTIONS TO THE SITE: From Happy Camp drive due north to F.S. road #17N32 and turn west, proceed about 3 miles.
ENHANCEMENT POTENTIAL: Low priority for enhancement: low suitability and existing ledges.

GROUND RESULTS

SITE NAME Lower Devil's Peak

SITE NUMBER 69

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	24-112	6/14/79
Aerial Photo Rating	D	
Quadrangle	Seiad Valley	
Legal Descrip.	T47N,R12W,S26&35	
Elevation	4800	
Cliff Height	150-200' (44-59m)	
Cliff Aspect	S	
Final Classification	Possible	

PREY NOTED: Robin, Common Flicker, Fox Sparrow, Flycatcher sp., Dark-eyed Junco, Pileated Woodpecker, Chickadee and Nuthatch sp. heard.
RAPTORS NOTED: Red-tail Hawk.
FEEDING HABITAT AVAILABILITY AND QUALITY: Above the cliffs open areas of rock and mountain shrubs. Descending downslope conifers increase and farther down oaks and madrone become common. Stands of conifers around cliffs. Prey availability appears adequate.
SITE RELATION TO WATER: The Klamath River flows s.e. to n.w. 2.5 miles s.w. of the cliffs. The E.F. of Portuguese Creek drains the west side of Middle and Lower Devil's Peak. Canyon Creek and Darkey Creek drain the east side. Schoolhouse Creek to the south.
DISTURBANCE POTENTIALS: There is marketable timber in the area. However it is presently roadless from Hwy. 96 2 miles south of the site to Red Butte 4 miles north, and from Goff Creek 3 miles west to Seiad Creek 4 miles west. The only access is by foot via the Pacific Crest Trail which runs along the top of Devil's Peak ridge. There is a lookout on Lower Devils Peak but no road to it, trail access only. Disturbance potentials are low presently, only from hikers and fire lookout.
FACTORS FOR PEREGRINE ESTABLISHMENT: Large mass of rock with good effective height overlooking a major river. Southern aspect. The rock is mostly in

small masses but suitable vertical faces exist. There are many cracks and fractures where suitable ledges may be present; one good ledge is noted on the drawing. Little or no disturbance.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: High elevation.

MANAGEMENT RECOMMENDATIONS: Check the site each year for occupation; this is high priority as the site is highly suitable. Maintain the area in its present undisturbed state, especially if peregrine occupation or establishment occurs. Disallow road-building or logging in the roadless area described above. Instruct fire lookout to avoid presence near the cliff but to watch for peregrines. Investigate extent of hiker use of trail for impact to the site.

DIRECTIONS TO THE SITE: From Hwy. 96 take the Pacific Crest Trail north from just west of Seiad Valley, or south from Red Butte (#69A), to Lower Devil's Peak. The cliffs are n.w. of Lower Devil's Peak Lookout.

ENHANCEMENT POTENTIAL: There are numerous vertical cracks and crevasses, which should accomodate placement of artificial ledges or enhancement of existing ledges.

GROUND RESULTS

SITE NAME Red Butte

SITE NUMBER 69A

Forest Name	Klamath	Dates Visited
Aerial Photo #	unknown	6/13/79
Aerial Photo Rating	C	
Quadrangle	Seiad Valley	
Legal Descrip.	T48N,R12W,S12	
Elevation	6700	
Cliff Height	total height: 300' (88m); largest face: 70' (21m)	
Cliff Aspect	SW	
Final Classification	Potential	

PREY NOTED: Robin, Common Flicker, Fox Sparrow, Dark-eyed Junco, Flycatcher sp., Nuthatcher and Chickadee sp. heard.

RAPTORS NOTED: Red-tail Hawk.

FEEDING HABITAT AVAILABILITY AND QUALITY: Habitat is mostly open, rock and low shrubs. Stands of mixed conifers occur in canyons where there are springs, becoming thicker downslope toward the Klamath River. Subjectively prey is not abundant but adequate, and probably improves downslope in the Klamath drainage.

SITE RELATION TO WATER: There are numerous springs on the mountain that originate small creeks draining into Seiad Creek and the Klamath River. There are four small lakes within a mile. The Klamath is just over 5 miles to the s.w.

DISTURBANCE POTENTIALS: None at this time. A jeep trail passes the cliff on the s.w. side about a quarter mile away but it gets little use; it is rugged and the only road in the area. Site is generally remote.

FACTORS FOR PEREGRINE ESTABLISHMENT: Reddish-orange rock, probably sandstone is high and dominant on the landscape; it is mostly broken and cracked but contains one substantial face. The cliff has a s.w. aspect with several ledges noted (see drawing). It is 70' in height, has good effective height. Close to a major river. A peregrine sighting was

reported by F.S. personnel in the area of the site in Rogue River N.F. to the north (contact Ken Coup, Klamath N.F. biologist).

FACTORS AGAINST PEREGRINE ESTABLISHMENT: High elevation; snow was present on the s.w. face during helicoptor check in April, but not at ground check in June. No visible sign of raptor activity on the rock.

MANAGEMENT RECOMMENDATIONS: Check the site periodically for sign of raptor activity. This is low priority however due to low suitability for peregrine nesting. Low priority is also given to ledge enhancement for the same reason. Further management is not indicated at this time.

DIRECTIONS TO THE SITE: From Seiad Valley drive northeast on F.S. road # 48N20 to Cook and Green Pass. Take jeep trail west. The last 2-3 miles must be walked or driven in 4WD. Cliffs are visible from jeep trail.

CONCLUDING COMMENTS: Because of low suitability of the site and lack of evidence of raptor activity on rock, it is felt that the peregrine sighted in the area was probably not in occupation of the site.

GROUND RESULTS

SITE NAME Vesa Creek

SITE NUMBER 72A

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	44-157	5/26/79
Aerial Photo Rating	C	
Quadrangle	Condrey Mountain	
Legal Descrip.	T46N,R8W,S14	
Elevation	3500	
Cliff Height	150-200 feet (44-59m)	
Cliff Aspect	NW-N	
Final Classification	Possible	

PREY NOTED: Rufous-sided Towhee, Blue Grouse (common), Scrub Jay, Flycatcher sp., Black-headed Grosbeak (abundant), Mourning Dove, Robin (abundant), Sparrow sp., Common Flicker, Black-throated Grey Warbler, Stellars Jay, Western Wood Peewee.

RAPTORS NOTED: Cooper's Hawk (probable nesting territory).

FEEDING HABITAT AVAILABILITY AND QUALITY: Habitat appears to be a moderately zeric one, probably similar to Castle Crags (#110). Vesa Creek beneath the cliff contains water, most small creeks are dry. Ceanothus, manzanita, scrub-chapparal is dominant, some chrysothalmus present. Habitat, however, is diverse. Many successional stages. Much edge. Supports a rich and diverse avifauna. Ridges and canyons present. A transition habitat between coastal and Columbian plateau-cascades.

SITE RELATION TO WATER: Vesa Creek originates less than 100 yards away. Klamath River 2 miles due north.

DISTURBANCE POTENTIALS: Low unless road is improved. Access road is presently undriveable due to washouts.

FACTORS FOR PEREGRINE ESTABLISHMENT: Cliff is 150-200 feet high. Near to Klamath River. Rich food base.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: NW-N aspect. Overhangs without ledges. Ledges present but sparse. Zeric environment. More likely to be

suitable for prairie falcons. No whitewash present.

MANAGEMENT RECOMMENDATIONS: North aspect makes this a low priority site for enhancement and management.

DIRECTIONS TO THE SITE: From Klamath River (at Oak Knoll Ranger Station) take Humbug Creek road east about 4 miles. Turn north on rough side road to west fork of Vesa Creek. Road washed out here. Walk about 2 miles to view of cliff. Access road open to 2WD only with good weather conditions and depending on year's road condition.

ENHANCEMENT POTENTIAL: Ledge enhancement could be accomplished at either of 2 large faces in yellowish rock areas. Marginal peregrine nesting territory so low priority is recommended for enhancement. There is a small cliff, about 75 feet high, 200 feet off access road in Section 22 - no ledges, north-facing. With ledge enhancement prairie falcons or golden eagles might utilize. This again is low priority.

GROUND RESULTS

SITE NAME Townsend Gulch

SITE NUMBER 74

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	52-9	5/16/79
Aerial Photo Rating	none	
Quadrangle	Scott Bar	
Legal Descrip.	T45N,R11W,S34	
Elevation	4000.	
Cliff Height	50' (15m) maximum	
Cliff Aspect	S	
Final Classification	Possible	

PREY NOTED: Stellars Jay, Common Flicker, Robin, Mourning Dove, Black and White Warbler.

RAPTORS NOTED: Golden Eagle (spotted several times), Kestral, Red-tail Hawk.

FEEDING HABITAT AVAILABILITY AND QUALITY: The habitat is mixed conifers on the upper slopes, with manzanita and oaks on the lower slopes.

SITE RELATION TO WATER: The rocks are on a ridge one mile the the north west of the Scott River.

DISTURBANCE POTENTIALS: The timber is not great in amount, and slopes are steep enough to discourage logging. Any other disturbance is unlikely. Scott River Road passes by within a mile but it should not be much of a disturbance due to vertical protection.

FACTORS FOR PEREGRINE ESTABLISHMENT: South facing cliff near a major river.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: The rocks are not dominant with substantial vertical faces. Ledges do not appear very good. It is felt peregrines would first choose Indian Scotty or Anderson Peak nearby.

MANAGEMENT RECOMMENDATIONS: None. The rocks do not appear suitable enough to warrant special consideration in management plans.

DIRECTIONS TO THE SITE: Rocks can be seen from Scott River Road, one mile northeast of Gold Flat. Hike up gulch for closer look.

ENHANCEMENT POTENTIAL: Low suitability for peregrine nesting, low enhancement priority.

GROUND RESULTS

SITE NAME South of Scott Bar/Scott River

SITE NUMBER 74A

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	Not known	5/17/79
Aerial Photo Rating	None	
Quadrangle	Scott Bar	
Legal Descrip.	T45N,R10W,S28,31	
Elevation	2000	
Cliff Height	Lower: 120' (36m); upper: 100' (30m)	
Cliff Aspect	W	
Final Classification	Possible	

PREY NOTED: Common Flicker, Stellars Jay, Mourning Dove, Black-capped Chickadee, Black-headed Grosbeak, Hairy Woodpecker.

RAPTORS NOTED: Turkey Vulture, Kestral.

FEEDING HABITAT AVAILABILITY AND QUALITY: The slope containing the cliffs is mostly vegetated with oaks and mixed conifers. The surrounding ridges are drained by a number of creeks providing riparian habitat, and the Scott River canyon which is immediately adjacent should provide good forage.

SITE RELATION TO WATER: The Scott River flows immediately below the cliffs. Many streams enter the Scott in the vicinity of the cliffs: Wooliver, Ford, South Fork, Big Ferry, Little Ferry, Schuler Gulch.

DISTURBANCE POTENTIALS: There are several residences near the Scott Bar site and the Scott River receives recreational use but mainly later in the spring and summer. Activity at the residences are mostly concealed by trees. Schuler Gulch site has been checked for uranium (local contact) and may have a future mining potential.

FACTORS FOR PEREGRINE ESTABLISHMENT: Cliffs south of Scott Bar face west, have 2 vertical faces: one in top quarter, about 100' in height, 400' effective height; one on lower third of slope, about 120'. One ledge noted on top face (see drawing). Schuler Gulch cliffs have greater height and more ledges (see drawing). Top Scott Bar cliff resembles south cliff of Murderer's Bar, which is an active peregrine cliff.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Ledge development is poor on Scott Bar cliffs. Schuler Gulch cliffs are the result of a slide: cliffs are sloughy, crumbly, unconsolidated; face west, north, and northwest.

MANAGEMENT RECOMMENDATIONS: Check the site periodically for sign of raptor activity. If any is noted investigate the site closely for enhancement potential, avoid logging in the vicinity and road work on the Scott River Road below the rocks during the spring.

DIRECTIONS TO THE SITE: From town of Scott Bar drive southwest on road along Scott River 2--3 miles. Cliffs are visible from the road.

ENHANCEMENT POTENTIAL: Upper Scott Bar cliff has good effective height, one apparent ledge, and resembles an active cliff; could be considered for enhancement.

GROUND RESULTS

SITE NAME Anderson Peak

SITE NUMBER 75

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	48-134	5/16/79
Aerial Photo Rating	C	5/17/79
Quadrangle	Scott Bar	7/25/79
Legal Descrip.	T44N,R3W,S12&13	
Elevation	4500	
Cliff Height	150' (44m)	
Cliff Aspect	W-NW	
Final Classification	Possible	

PREY NOTED: Common Flicker, Stellars Jay, Mourning Dove, Chickadee sp., Black-headed Grosbeak, Hairy Woodpecker.

RAPTORS NOTED: Adult female Peregrine Falcon.

FEEDING HABITAT AVAILABILITY AND QUALITY: The habitat is a mixed hardwood and coniferous forest; conifers more prevalent higher on the slopes. Slopes are very steep on the eastern side of the river, more gradual on the west. The site overlooks the Scott River canyon which should provide good forage.

SITE RELATION TO WATER: The Scott River flows n.e. 1 mile or less to the n.w. of the cliffs. It enters the Klamath River about 5 miles to the north.

DISTURBANCE POTENTIALS: This is a logging area; heavy logging has occured on private land within 2 miles to the east. A F.S. road passes within ½ mile of the site to the west. However, the slope in close proximity of the cliff is very steep which may discourage logging there.

FACTORS FOR PEREGRINE ESTABLISHMENT: Active peregrine site (#76) within three miles. The best vertical face is about 150' in height, has ledges (see drawing), and with good effective height is a suitable nesting cliff. Excellent riverine location, close to two major rivers. Good forage base.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: West to n.w. aspect. Ledges present may not be suitable. Excepting the cliff mentioned above, the rock lacks substantial vertical faces.

MANAGEMENT RECOMMENDATIONS: Check the site yearly for evidence of raptor activity. Logging and roadwork should be avoided in the immediate area from mid-Feb. to late June. If peregrine establishment occurs, prohibit logging within the basin containing the cliff year round. The site could be considered for enhancement.

DIRECTIONS TO THE SITE: From Hwy 96 near Hamburg take the Scott Bar Rd. The rocks can be seen from the road around Gold Flat. Or take F.S. road # 45N59 north from 1 mile east of Indian Scotty campground, past Scott Bar Mtn. L.O. turnoff to view of the rocks from ¼ mile away.

ENHANCEMENT POTENTIAL: Existing ledges may not be suitable. A good overhang exists in the top quarter of the cliff that would probably accommodate an artificial structure. The site is suitable enough for such a project, however it is less than a mile from the Forest border to the east where the area is mostly in private ownership, which may make enhancement low priority.

CONCLUDING COMMENTS: An adult female peregrine was sighted approx. two miles south of the cliff, flying just above tree level on the opposite side of the canyon from Indian Scotty (#76). It is felt this bird was probably from the Indian Scotty site, but this cannot be considered definite.

GROUND RESULTS

SITE NAME Indian Scotty

SITE NUMBER 76

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	48-130	5/15-16/79
Aerial Photo Rating	B	
Quadrangle	Scott Bar	
Legal Descrip.	T44N,R11W,S35,36	
Elevation	4400	
Cliff Height	Various faces 150-400' (44-118m)	
Cliff Aspect	All	
Final Classification	Active	

PREY NOTED: Stellars Jay, Black-headed Grosbeak, Dark-eyed Junco, Quail, Common Merganzer, Band-tailed Pigeon, Canada Goose, Great Blue Heron, Swallow sp.

RAPTORS NOTED: Red-tail Hawk, Turkey Vulture, Osprey.

FEEDING HABITAT AVAILABILITY AND QUALITY: The area is primarily dense coniferous forest. Near the river and on some of the south-facing slopes, mixed hardwood and chaparral. Prey species were not abundant in the immediate vicinity, but Scott Valley is within easy hunting range with its abundant and varied prey base.

SITE RELATION TO WATER: A small creek flows directly below the western side of the cliff from south to north and enters the Scott River one mile to the north. Boulder Creek 1 mile due West.

DISTURBANCE POTENTIALS: There is much marketable timber in the area. Logging has already occurred to the west and north within 1-2 miles and to the s.w. within 3-4 miles, and future logging may be a definite disturbance factor. Frank Ballridge (B.L.M.) informs that a timber sale is planned in the vicinity for 1983. A F.S. road passes within ½ mile of the site to the west, however, distance and vertical protection should be sufficient to prevent traffic disturbance. Foot access to the site should in most instances be discouraged by steep rugged terrain.

FACTORS FOR PEREGRINE ESTABLISHMENT: Excellent rock. High vertical faces of sheer consolidated granite (150-400 feet in height) with aspects west and southwest, and many ledges, one with whitewash (see drawing). Excellent vertical height, large rock masses overlooking a major river.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: The best cliffs do not have a southern aspect. Some face n.w. and n.e. (see drawings). However suitable aspects are available.

MANAGEMENT RECOMMENDATIONS: Restrict logging in the vicinity from mid-February to late June. Close F.S. road #44N53 to public access for the same duration to discourage unauthorized entry by curiosity seekers and unscrupulous falconers. Minimize public awareness of the site. Check the site yearly for occupation and success. Leave as a non-guarded site for the present as it should be relatively unknown and foot access is difficult and cliff masses large.

DIRECTIONS TO THE SITE: From Fort Jones or Scott Bar take Scott River Rd. along the Scott River to Indian Scotty Campground. Turn south on F.S. road #44N45 and left on 44N53 to view of cliffs. Hike upslope for closer look.

ENHANCEMENT POTENTIAL: There are many overhangs without apparent ledges which

might accommodate artificial structures. However, enhancement should be unnecessary as the site presently contains an active eyrie.

CONCLUDING COMMENTS: The site is active for peregrines in 1979. No falcons were observed from helicoptor on this survey or during ground check. The extensive nature of the rock and many large cliff faces and aspects permitted the nesting birds to escape notice, despite high suspicions that the site would be found occupied. However, in 2 visits to the site subsequent to our own (6/22-6/26) Frank Ballridge and Jeff Monk (B.L.M.) confirmed nesting by peregrines. They observed 1 adult and three fledglings. Eyrie location was not determined. This is the first known year of peregrine activity for this site.

GROUND RESULTS

SITE NAME Nordheimer Creek

SITE NUMBER 83

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	26-21	5/16/79
Aerial Photo Rating	A,B,C	5/25/79
Quadrangle	Salmon Mtn.	
Legal Descrip.	T10N,R7E,S28	
Elevation	3000	
Cliff Height	Unknown	
Cliff Aspect	Unknown	
Final Classification	Unknown	

PREY NOTED: Not noted.

FEEDING HABITAT AVAILABILITY AND QUALITY: Not noted.

SITE RELATION TO WATER: From aerial photo analysis up to seven areas of r rock lie in the drainage adjacent to Nordheimer Creek or its tributaries. The Salmon River is 2-3 miles n.w. of the site.

DISTURBANCE POTENTIALS: Helicoptor logging from the Hog fire was occurring in the area in mid-May, particularly Mc Neil Creek drainage. Ground spraying of herbicides also at that time (Altrazine and 1 or 2 others).

FACTORS FOR PEREGRINE ESTABLISHMENT: Not noted.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Not noted.

MANAGEMENT RECOMMENDATIONS: The site should be investigated as soon as possible for peregrine suitability.

DIRECTIONS TO THE SITE: Attempt to reach site via logging roads failed; Cold Springs and Horn Creek Gap inaccessible due to slides. Two attempts to reach site via road and trail along creek failed due to hostile non-cooperation of landowner who controls that access, Leo Brown. Mr. Brown finally agreed to passage if E. Wenzel came back without his dog, however time did not permit a re-visit. Access roads should be checked for passability in future visits, and Mr. Brown approached with caution.

ENHANCEMENT POTENTIAL: Not noted.

CONCLUDING COMMENTS: This site was not assessed for peregrine nesting suitability. Ground check failed due to blocked roads and hostile landowner (see Directions). Helicoptor check failed because fuel ran low before site could be reached; by the time fuel was obtained and a return attempted, the weather had gotten too bad for flying. However, the area was observed minimally during ground check attempts at Nordheimer Creek and from the top of the drainage at Salmon Mtn. during ground check there; no falcon activity was noted. No rocks were visible from Salmon Mtn.

GROUND RESULTS

SITE NAME Knownothing Creek

SITE NUMBER 84

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	20-166	5/14-15/79
Aerial Photo Rating	C	5/24/79
Quadrangle	Salmon Mtn.	5/27/79
Legal Descrip.	T10N,R8E,S30	5/30/79
Elevation	1800	6/6-7/79
Cliff Height	150' (44m)	
Cliff Aspect	SE	
Final Classification	Active	

PREY NOTED: St. Jay, Robin, Ruffed Grouse, Mtn. Quail, Black Phoebe, Hermit Thrush, MacGillivray's Warbler, Black-throated grey Warbler, Blck-headed Grosbeak (abundant both in flocks of 5-7 and on territory), Rufous-sided Towhee, Band-tailed Pigeons reported as abundant by locals spotted by observer in the area and as falcon prey.

RAPTORS NOTED: Pair Peregrine Falcons.

FEEDING HABITAT AVAILABILITY AND QUALITY: General habitat appears excellent. Knownothing Creek and S.Fork, N.Fork, Main Fork of Salmon River all are accessible to this pair. Reports from locals indicate that U.S.F.S. has recently sprayed area (McNeil Ck.) with herbicides within one mile of site. This could affect both quality of habitat and prey.

SITE RELATION TO WATER: Site is approximately 2 miles from South Fork Salmon River, 500+ vertical feet above Knownothing Creek. Major and minor river canyons abundant.

DISTURBANCE POTENTIALS: This pair was not observed during pre-egglaying or incubation and the pair's tolerance (sensitivity) at these stages of reproduction is not known. Female's sensitivity was high at young stage. Knownothing Creek Rd. passes below cliff about 200' vertical. Many mining claims are being worked here. There is little apparent disturbance from mining traffic however, as long as traffic is light and no logging traffic occurs. A local reported that the owner of one mining claim, Jerry Bissels-Hidden Cabin claim, commonly uses dynamite in his mining operations; also that fishermen frequent the area on opening day and use the turnout where observations were made from. Dynamiting occurred this year during courtship and incubation stages. Local people, including most of the semi-resident miners, are apparently unaware of the falcons. Two semi-residents, Hugh and Margie Vincent, are aware of their presence. Current local traffic and mining operations, not involving blasting, are considered non-injurious to the pair and site. Any increased traffic or noise are viewed as potentially injurious. Fishing traffic may be injurious, particularly parking at the turnout. There is potential threat from irate residents whose activities are curtailed. The overall disturbance potential of this site is high.

FACTORS FOR PEREGRINE ESTABLISHMENT: The territory appears to have had historical usage, judging by amount of whitewash, high suitability of cliff and territory, and older age of female. Is presently established. Cliff is protectively screened by trees.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: High disturbance potential could

affect continued occupation of this site. Aerial spraying of herbicides or pesticides could adversely affect nesting success.

MANAGEMENT RECOMMENDATIONS: Check site each spring for peregrine falcon activity. Prohibit dynamiting from late February or early March until after fledging, also any major roadwork or logging in the Knownothing Creek drainage during same period. Because of high disturbance potential, 2 alternative management plans are suggested. The first is that a full or parttime guard be assigned to the site. This would prevent harmful activities but increase public awareness of the site. The second plan involves public relations work by USFS so that, by cooperative agreement, local miners do not blast within one mile of site between February and post-fledging. This plan would also necessitate monthly or bi-weekly visitation of the territory by observers to ascertain occupancy, effects of human activities, and site success. Any observer traffic, even discreet, is viewed as ultimately resulting in local awareness of the site. Whether a full-time guard is needed ultimately depends on action-reaction of Forks of Salmon locals. Education may help but attitude of locals probably greatly depends on how many of their activities are restricted. Mitigation and compromise is suggested. Mining activities are viewed as being potentially compatible with the resident falcons (excluding blasting) - the cliff is situated $\frac{1}{4}$ mile from creek but has adequate vertical height above creek to afford protection-security; also screened by trees. Any increased human activity beneath the cliff on or near the road is viewed as injurious. Aerial or ground spraying of herbicides in area is viewed as potentially injurious to the falcons (residues) and to the territory (foraging habitat). Potential effects of spraying on falcons, habitat, and prey should be investigated. If adequate information is not presently available such spraying should be considered injurious until proven otherwise. Because of easy accessibility of the site public awareness of it should generally be minimized. The site should be climbed this year post-fledging to collect data on eyrie dimensions, prey, and eggshell thickness and pesticide content.

DIRECTIONS TO THE SITE: A few miles east of Forks of Salmon, on the S. Fork Salmon River, proceed south up Knownothing Creek. Continue up a steep gravelly section of road to a turnout. Park there and observe. If defense is great park further up or down road.

ENHANCEMENT POTENTIAL: Ledges appear adequate. No enhancement is necessary.

CONCLUDING COMMENTS: The site is active for peregrines in 1979. A single adult male was observed from helicoptor and the nesting pair was confirmed during ground check. Three young confirmed fledged from site - one male and two females. See drawing for eyrie location.

GROUND RESULTS

SITE NAME Knownothing Creek/Barton Cabin

SITE NUMBER 85

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	25-23	5/15/79
Aerial Photo Rating	B	
Quadrangle	Salmon Mountain	
Legal Descrip.	T10N,R8E,S31	
Elevation	1880	
Cliff Height	100' (30m)	
Cliff Aspect	N	
Final Classification	Potential	

PREY NOTED: See Site #84.
FEEDING HABITAT AVAILABILITY AND QUALITY: See Site #84.
SITE RELATION TO WATER: Located on Knownothing Creek 2.5 miles south of Salmon River South Fork.
DISTURBANCE POTENTIALS: See Site #84.
FACTORS FOR PEREGRINE ESTABLISHMENT: See Concluding comments.
FACTORS AGAINST PEREGRINE ESTABLISHMENT: Two rocks in area, both marginally suitable. A small cliff located to south of creek 50 yards from Barton Cabin: too low to creek and north-facing only about 100 feet high. Another rock 100 yards upstream from Barton Cabin and 100 yards vertical above creek: north-facing, estimate of height is less than 100 feet. Resident peregrine falcons 1-2 miles away (#84). No apparent ledges.
MANAGEMENT RECOMMENDATIONS: See Concluding Comments.
DIRECTIONS TO THE SITE: From Knownothing Creek site (#84) continue south on road to Barton Cabin.
CONCLUDING COMMENTS: Though north-facing these cliffs are low in elevation and low on the drainage which may afford protection from the elements. There is the possibility that with enhancement the pair of peregrines at Knownothing Creek might use one as an alternate nest cliff. If peregrines are not found at Knownothing check this site for occupation.

GROUND RESULTS

SITE NAME Cecilville

SITE NUMBER 86

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	47-24	5/13-14/79
Aerial Photo Rating	B	5/25/79
Quadrangle	Cecilville	5/26/79
Legal Descrip.	T38N,R12W,S22&27	6/4/79
Elevation	2600	6/6/79
Cliff Height	165' (148m)	
Cliff Aspect	SW	
Final Classification	Historical/Active	

PREY NOTED: Yellow-rumped Warbler, Stellars Jay, Western Wood Peewee,

Yellow Warbler, MacGillivray's Warbler, Rough-winged Swallow, White-throated Swift, Lark Bunting (abundant), Violet-green Swallow, Vaux's Swift.

RAPTORS NOTED: Turkey Vulture, Goshawk (immature), pair Peregrine Falcons.

FEEDING HABITAT AVAILABILITY AND QUALITY: Excellent. Major river canyon. Side creek canyons. Diverse in terms of habitat, transition zones and edge.

SITE RELATION TO WATER: Salmon River runs between north and south rock within 1/4 mile of each.

DISTURBANCE POTENTIALS: Disturbance has not been a problem at this site in recent years and it has been successful since 1976. However, disturbance potential is great. Site is immediately adjacent to a public road and is easily accessible. Birdwatchers, interested persons, unscrupulous falconers have potential for causing failure. Main threat time for egg robbing is late March to early April. Logging trucks do not presently cause undue disturbance. The only traffic-caused disturbance was in June, 1976 when a fledged young was found on the road. Site's easy access makes disturbance potential from observing people high, though at the same time the pair appears to exhibit a high tolerance level; observation from or above the road has not caused disturbance defense behavior in the recent past, to our knowledge. Nor have known illegal falconer activities occurred since re-occupation. Extreme disturbance potential exists for road work beneath the cliff. This should be avoided between mid-January and July 1. Road is presently very narrow with little parking.

FACTORS FOR PEREGRINE ESTABLISHMENT: Historical site. Re-occupied in 1976 (E.O. Wenzel), active and successful since then. SW aspect, extremely good ledges provide afternoon sun protection. A prime peregrine cliff. Prime adjacent habitat.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: High vulnerability of site. Extremely close to potential human disturbance.

MANAGEMENT RECOMMENDATIONS: Manage human activity. Do not create parking area or access to river for fishermen. Because of this site's success leave as is. Needs yearly observation by USFS or other biologists; Recommended observation at least once per month during March, April, May, June. A full-time guard is not recommended as it would only increase awareness of the site. If site fails for human caused reasons and guard is necessary, establish camp on ridge 1/4+ mile to west and park vehicles discretely. Minimize human awareness of site.

DIRECTIONS TO THE SITE: 3 miles west of Cecilville on road along Salmon River. Both north and south cliffs can be observed at once from road 1/4 mile west of north cliff.

ENHANCEMENT POTENTIAL: No enhancement is necessary as present ledge availability is adequate.

CONCLUDING COMMENTS: A pair was confirmed during ground check. Adults and fresh whitewash observed on both north and south cliffs. No young confirmed but believed present by adult behavior. Prey exchange observed at south cliff 5/14 and 6/6. Young possibly heard on two occassions 5/14. Defensive behavior observed. Adult pair on south cliff 5/14, on north cliff 5/26. Adults observed with prey at two locations on south cliff, one of which believed to be eyrie (see drawing). A third adult confirmed in the area 5/14.

GROUND RESULTS

SITE NAME Hayden Ridge

SITE NUMBER 90

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	6-29	5/14-15/79
Aerial Photo Rating	A	
Quadrangle	Etna	
Legal Descrip.	T41N,R8W,S32	
Elevation	5000	
Cliff Height	150-200' (44-59m)	
Cliff Aspect	SW-W; nest SW	
Final Classification	Possible	

PREY NOTED: Brewer's Blackbird, Quail, Scrub Jay, Stellar's Jay, Western Kingbird, Woodpecker (several species), Rock Dove, Mourning Dove, Starling, Meadowlark, Robin, and other small songbirds, waterfowl, some shorebirds.

RAPTORS NOTED: Juvenile Golden Eagle, Red-tail Hawk, pair adult Prairie Falcons.

FEEDING HABITAT AVAILABILITY AND QUALITY: Immediately below the cliff is barren ground with sagebrush and occassional pinyon pine and juniper. The west slope is chapparal, pinyon pine and juniper. In the canyon on the south side and up the north slope of the adjacent hill is forested area of conifers and hardwoods. The valley floor about one mile to the west is irrigated pasture land and willow thickets.

SITE RELATION TO WATER: A small stream flows in Messner Gulch from east to west along the south side of the cliffs, into the Scott River about one mile to the west.

DISTURBANCE POTENTIALS: Minimal. There is a ranch house about 3/4 mile to the west. There is little reason for people to go to the cliffs except in the fall for hunting.

FACTORS FOR PEREGRINE ESTABLISHMENT: Abundant and varied prey. Intensive irrigation in the valley may increase air humidity in an otherwise arid location. The rocks are a dominant feature of the landscape and may attract peregrines from the Salmon River drainage, which is heavily occupied. Good ledges and potholes are present (see sketch). South to southwest aspect. Two southernmost cliffs have dominant vertical faces.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Resident prairie falcons at the cliff.

MANAGEMENT RECOMMENDATIONS: The area should be checked every spring for occupation. The site is located entirely on private land with only 2 F.S. sections immediately adjacent to the south; this makes effective management presently unfeasible. However, because of the high suitability of the site, a land exchange should be considered to bring the site into F.S. ownership.

DIRECTIONS TO THE SITE: Take East Valley Road going north from Callahan. Cliffs are obvious, to east of road.

ENHANCEMENT POTENTIAL: Ledge availability appears adequate.

CONCLUDING COMMENTS: Site is active for prairie falcons in 1979. A pair confirmed at the site 5/15 during ground check. Eyrie is located on lower of the two large southernmost cliffs (see drawing). Young not

GROUND RESULTS

SITE NAME Lover's Leap

SITE NUMBER 91

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	39-147	6/6/79
Aerial Photo Rating	A	
Quadrangle	China Mountain	
Legal Descrip.	T41,R7W,S31	
Elevation	5100	
Cliff Height	125+' (37m)	
Cliff Aspect	E, N, W, NW	
Final Classification	Possible	

PREY NOTED: Common Snipe, Western Meadowlark, Red-winged Blackbird, Robin, Swallow sp., Killdeer, Common Flicker. Wild domestic pigeons are living on the cliff.

RAPTORS NOTED: Pair Prairie Falcons.

FEEDING HABITAT AVAILABILITY AND QUALITY: Habitat surrounding site is moderately zeric. Scott River provides riparian habitat. Avifauna is subjectively not extremely diverse but is adequate for peregrines. Prey species noted are common. Agricultura supports feral pigeons.

SITE RELATION TO WATER: East Fork Scott River 1 mile west. Kangaroo headwaters immediately southeast.

DISTURBANCE POTENTIALS: The old Parker Ranch is within 1 mile of site but present and forseeable human activities would not interfere with falcons.

FACTORS FOR PEREGRINE ESTABLISHMENT: At least one historical site is fairly close to this site and represents an even more zeric habitat type than this. Scott River drainage is rumoured to have a nesting pair of peregrines. Cliff is limestone substrate, ledges and cracks prevalent, 125+' vertical.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Resident prairie falcons. Zeric environment. Aspects include E, N, W faces; N and W faces are best but least preferred by peregrines.

MANAGEMENT RECOMMENDATIONS: Leave as is for present. Low priority site for ledge enhancement. Should be observed yearly for falcon activity. Because site is visible from the paved road observation to ascertain occupancy by either large falcon species may be done relatively easily. If peregrines are observed in future years consider closer inspection of E and W faces for ledges and enhancement possibilities. Contact Ron Garrett to see if he has any historical information on this site.

DIRECTIONS TO THE SITE: Site is situated to the south of Parker Ranch between Gazelle and Callahan.

ENHANCEMENT POTENTIAL: See Management Recommendations.

CONCLUDING COMMENTS: Site is active for prairie falcons in 1979. A pair was confirmed during ground check with at least 4 young verified in eyrie. See cliff sketch for eyrie location. Nest cliff aspect is n.w.

GROUND RESULTS

SITE NAME Antelope Creek

SITE NUMBER 207

		Dates Visited
Forest Name	Klamath	
Aerial Photo #	76-29-175	6/11-12/79
Aerial Photo Rating	B	
Quadrangle	Bray	
Legal Descrip.	T42N,R1W,S10&11	
Elevation	6000	
Cliff Height	best face: 250' (74m)	
Cliff Aspect	S, SE; best face: S	
Final Classification	Possible/Highly suspected	

PREY NOTED: Robin (most numerous), Stellars Jay, Black-headed Grosbeak, Common Flicker, Mourning Dove, Wilson's Warbler, Calliope Hummingbird, Crossbill sp., Flycatcher sp., Swallow sp.

RAPTORS NOTED: Adult male Goshawk.

FEEDING HABITAT AVAILABILITY AND QUALITY: Mixed coniferous forest on the hillsides and in groves in the valley. The valley floor is wet meadows cut through by Antelope Creek, with stands of conifers, aspen, willow. Grass Lake may be within foraging range. Prey availability is good.

SITE RELATION TO WATER: Antelope Creek flows from west to east along the south side of the cliffs. Grass Lake is about 10 miles to the n.e.

DISTURBANCE POTENTIALS: This is a recreation area. A road passes within half mile of the site on the opposite side of the creek; however the cliffs have sufficient vertical height to minimize disturbance from persons on foot. Disturbance potential is generally low. Logging in the vicinity could pose a future threat as there is marketable timber.

FACTORS FOR PEREGRINE ESTABLISHMENT: Excellent rock: solid consolidated granite, dominant and striking in appearance, high vertical faces with a south aspect. Good effective height overlooking a river valley. There are three distinct rocks in the area: A, the farthest west; B, 1/2 mile e. of A; C, 1 mile e. of A. All have suitable ledges (see drawings). Rock C is the largest and most suitable: it has vertical faces up to 250' in height and an excellent pothole/ledge with whitewash. Prey is abundant.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Occupied by an adult prairie falcon in April (this survey, helicopter). The site is historic for prairie falcons; an active pair was present in 1978 (Wenzel).

MANAGEMENT RECOMMENDATIONS: Observe the site every spring for occupation. Avoid logging in the area from the first of February to the end of June.

DIRECTIONS TO THE SITE: From Hwy 97 turn south on road to Bray and Tennant. Follow signs to Stephen's Pass via F.S. road 43N13. Slightly less than a mile past the pass, turn right into Antelope Creek Valley (not marked) and drive to view of cliffs looking north.

ENHANCEMENT POTENTIAL: Enhancement is not recommended as present ledge availability appears adequate.

CONCLUDING COMMENTS: A single adult prairie falcon was turned from Rock C during helicoptor survey 4/13. However, no falcons were observed during ground check 6/11-12 so abandonment is indicated. The site is historic for prairie falcons.

APPENDIX D

A PEREGRINE FALCON NESTING HABITAT SURVEY IN THE SHASTA-TRINITY NATIONAL FOREST - 1979

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ST-1

HELICOPTER RESULTS

SITE NAME: TOMHEAD MOUNTAIN

SITE NUMBER: 26

DATE VISITED: 4/7/79

TIME OF ARRIVAL: 1115

TOTAL TIME AT SITE: 5 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 74-105 m (250-350 ft)

TOTAL SCORE: 6.0

CLIFF SCORE: 3.0

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Highly Suspected/Poss.

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality			x			x
Ledge Location			x	x	x	x
Enhancement Potential			x			x
Human Disturbance			x			x
Overall Impression			x			x

COMMENTS:

-Steep gorge, lots of cliff, pinnacle-like with talus

-Awful lot of cliff- so extensive, so high, so fractured, hard to get an estimate on it

-Cliff ends 150 ft above river

-Whitewash perch

-Good Peregrine Falcon cliff: habitat broken up, open air space, good exposure

-Ledge locations all over

HELICOPTER RESULTS

SITE NAME: BEEGUM GORGE

SITE NUMBER: 92

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1020

TOTAL TIME AT SITE: 2.5 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location	x			x		
Enhancement Potential	x			x		
Human Disturbance		x			x	
Overall Impression	x			x		

COMMENTS:

-South-east facing cliff, but not suitable, lg. rock but not vertical

-Very small cliff, not worth reching, #1 all around

-Cliff very short, no ledges, no whitewash

-One road nearby

-Unsuitable

-Elevation: 3500 ft

-Proximity to water: .5 miles to nearest creek, 10 miles to river

HELICOPTER RESULTS

SITE NAME: KINGFISHER POINT

SITE NUMBER: 93

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1141

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression	x			x		

COMMENTS:

-Jumbled up granite or metamorphic rock (dark-colored)

-No real good area or faces, just a big jumbled up mass of cliff

-Elevation: 2500

-Proximity to water: 1 mile

HELICOPTER RESULTS

SITE NAME: MARBLE CAVES

SITE NUMBER: 93A

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1137

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 29 m (100 ft)

TOTAL SCORE: 4.0

CLIFF SCORE: 2.0

LEDGE SCORE: 2.0

GROUND VISIT: Yes

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x	x			x
Ledge Quality		x				x
Ledge Location						
Enhancement Potential		x			x	
Human Disturbance						
Overall Impression		x			x	

COMMENTS:

-Limestone Cliffs - about 100 ft high, little boulders

-No horizontal ledges, no whitewash , one good spot

-On southern most limestone cliff there's 3 fairly good ledges with whitewash on them ; these cliffs are about 150 ft

-Going north, 2 more good ledges on next cliff

-Good hole for enhancement - right over river

-Again on southern side - one pothole with whitewash

-"Very potential" site, could be reworked, a ledge could be put into it, nice little cliff, I like it

-Rating: at this stage I'd rate it about a #2 (White)

HELICOPTER RESULTS

SITE NAME: LITTLE BEAR WALLOW CREEK

SITE NUMBER: 94

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1150

TOTAL TIME AT SITE: 2.5 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 44 m (150 ft)

TOTAL SCORE: 4.0

CLIFF SCORE: 2.0

LEDGE SCORE: 2.0

GROUND VISIT: No

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x			x	
Ledge Quality		x			x	
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression		x			x	

COMMENTS:

-Site 94 has at least 3 separate cliffs: one north exposure, two southwest exposures

-All cliffs look like they have at least two ledges per cliff

-Lots of rock - mostly 150 ft - mossy

-A few Band-tailed Pigeons

-Not much whitewash

-"Marginal" (White)

-Will be hard to ground check since it's upriver

HELICOPTER RESULTS

SITE NAME: PLUMMER CREEK/FRIEND LAKE

SITE NUMBER: 95

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1157

TOTAL TIME AT SITE: 1.5 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 4.5

CLIFF SCORE: 2.5

LEDGE SCORE: 2.0

GROUND VISIT: Yes

STATUS: Highly Suspected

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		X			X	
Ledge Quality		X			X	
Ledge Location		X	X		X	X
Enhancement Potential						
Human Disturbance			X			X
Overall Impression		X	X			

COMMENTS:

-Couple of really nice rocks in here

-Whitewash ledge in here

-Northern most section that's separated from main cliff is very small, nothing on it; all ledges slope out on this portion

-Several whitewash portions of cliff here, but we don't see any falcons coming out

-Signs of activity, habitat good below, a clearing, & less than 2 miles from main body of river

-Small enough that chopper covers it

HELICOPTER RESULTS

SITE NAME: BUTTER CREEK CAVES

SITE NUMBER: 96

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1203

TOTAL TIME AT SITE: 1.5 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 90 m (300 ft)

TOTAL SCORE: 4.0

CLIFF SCORE: 2.0

LEDGE SCORE: 2.0

GROUND VISIT: Yes

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x			x	
Ledge Quality		x			x	
Ledge Location						
Enhancement Potential						
Human Disturbance	x			x		
Overall Impression		x			x	

COMMENTS:

-Big, high cliff (effective ht=300 ft, but vertical faces are few)

-Looks better from distance than up close

-Abundance of ledges, quite adequate

-No signs of whitewash on lower portion, some whitewash or mineralization on upper portion

-Several types of human disturbance; mining road, logging road

HELICOPTER RESULTS

SITE NAME: BIG SLIDE

SITE NUMBER: 97

DATE VISITED: 4/8/79 4/14/79

TIME OF ARRIVAL: 1100 1210

TOTAL TIME AT SITE: 2 min. 4 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 29 m (100 ft)

TOTAL SCORE: 5.25

CLIFF SCORE: 2.5

LEDGE SCORE: 2.75

GROUND VISIT: Yes

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						X
Ledge Quality					X	
Ledge Location						
Enhancement Potential						X
Human Disturbance			X			X
Overall Impression		X			X	

COMMENTS:

-Broken cliffs-at most 100 ft vertical faces, no vertical fractures

-No signs of whitewash

-Some shelving, no overhangs

-One perch, some overhangs

-Lots of vertical fractures, few horizontal fractures

-Abundance of areas where ledges could be placed

-Vertical, right on river

HELICOPTER RESULTS

SITE NAME: BURNT RANCH

SITE NUMBER: 98A

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1228

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: Peregrine Falcon

CLIFF HEIGHT: 119-147 m (300-400 ft)

TOTAL SCORE: 6.0

CLIFF SCORE: 3.0

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Historical*

(Active 1979 - Peregrine Falcon)

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality			x			x
Ledge Location		x	x		x	x
Enhancement Potential						
Human Disturbance		x			x	
Overall Impression			x			x

COMMENTS:

-Historical Peregrine Falcon eyrie (Dave Harlow)

-Peregrine Falcon flushed off of 150-200 ft cliff (nesting)

-Huge expanse of cliff right above Trinity River

-Human Disturbance: Highway 299 & settlement across the river-probably has mimimal effect on falcons.

-Enhancement Potential: Ledges abundant, adequate as is

HELICOPTER RESULTS

SITE NAME: SCHNEIDER'S BAR

SITE NUMBER: 98B

DATE VISITED: 4/8/79

TOTAL SCORE: 2.75

TIME OF ARRIVAL: 1134

CLIFF SCORE: 1.5

TOTAL TIME AT SITE: 1 min.

LEDGE SCORE: 1.25

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT: 22 m (75 ft)

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x		x		
Ledge Quality	x					x
Ledge Location	x				x	
Enhancement Potential			x			x
Human Disturbance	x			x		
Overall Impression	x			x	x	

COMMENTS:

-Small site- about 75 ft high

-Elevation 2100 ft, overlooks river, above paved highway (299)

-Few ledges- most are sloped off - not at a good angle

-Only 1-2 good ledges

-Enhancement Potential: could be modified

-Rating: as is about a #1 (poor)

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HELICOPTER RESULTS

SITE NAME: HAYDEN FLAT

SITE NUMBER: 98C

DATE VISITED: 4/8/79

TIME OF ARRIVAL: 1136

TOTAL TIME AT SITE: fly by

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 3.0

CLIFF SCORE: 1.5

LEDGE SCORE: 1.5

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x	x				
Ledge Quality	x	x				
Ledge Location	x	x				
Enhancement Potential	x	x				
Human Disturbance						
Overall Impression	x					

COMMENTS:

-Site lays on hillside amongst conifers - sort of hidden, overlooks river and valley

-Not a very large cliff

-Broken, horizontal ledges; not real good; some potholes up higher

-Rating: #1-2 ; gut feeling= #1

-Not worth rechecking

-Not vertical, sloping, 60 ft at most, old whitewash (North side of river)

-Unsuitable at present

-Elevation: 2500 ft

HELICOPTER RESULTS

SITE NAME: NEW RIVER/DENNY STATION

SITE NUMBER: 100

DATE VISITED: 4/14/79

TOTAL SCORE: 2.0

TIME OF ARRIVAL: 1239

CLIFF SCORE: 1.0

TOTAL TIME AT SITE: 2 min.

LEDGE SCORE: 1.0

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT: 23 m (80 ft)

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location	x			x		
Enhancement Potential	x			x		
Human Disturbance		x			x	
Overall Impression	x			x		

COMMENTS:

-No vertical cliffs whatsoever- all gently sloping, some ledges

-One face - no whitewash whatsoever

-Cliff very short, trees on all facets of cliff face

-Around the corner: another cliff about 80 ft tall, no ledges visible, no whitewash, human disturbance present (old road)

-Two cliffs at site #100- neither are suitable

-Elevation: 3500 ft

-Proximity to water: 1 mile

-Habitat: conifer

HELICOPTER RESULTS

SITE NAME: EAST FORK NEW RIVER

SITE NUMBER: 101

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1249

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x					
Ledge Quality	x					
Ledge Location	x					
Enhancement Potential	x					
Human Disturbance						
Overall Impression	x					

COMMENTS:

-Very short, crumbly

-Doesn't look too good

-Doesn't merit coming back to

-Band-tailed Pigeons observed

-Rating: #1

-Elevation: 3400 ft

-Proximity to water: 2.5 miles

HELICOPTER RESULTS

SITE NAME: EAST OF HOBO GULCH/EAST FORK TRINITY

SITE NUMBER: 102

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1259

TOTAL TIME AT SITE: 2.5 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 3.0

CLIFF SCORE: 1.5

LEDGE SCORE: 1.5

GROUND VISIT: No

STATUS: Pot/Pos

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

-Some vertical face - towards the top

-Lots of rubble

-One little speck of whitewash - cave in there

-Some ledges now, whitewash or mineralization under there, down low

-Marginal

-Elevation: 4500-6000 ft

-Proximity to water: 3.5 miles

HELICOPTER RESULTS

SITE NAME: EAST FORK TRINITY RIVER/WATSON CREEK

SITE NUMBER: 104

DATE VISITED: 4/13/79

TIME OF ARRIVAL: 1446

TOTAL TIME AT SITE: 2.5 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 44 m (150 ft)

TOTAL SCORE: 4.0

CLIFF SCORE: 1.0

LEDGE SCORE: 3.0

GROUND VISIT: No

STATUS: Potential/Poss.

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x					
Ledge Quality			x			
Ledge Location						
Enhancement Potential						x
Human Disturbance		x				
Overall Impression						

COMMENTS:

-Nice compact set of rocks with a few scattered outcrops nearby

-About 150 ft, high red mountain

--Snow on side of mountain

--Probably more than 200 ft, pretty good cliff: only "potential"

--"I like #104 for ledge enhancement: open country, plenty of area for a bird to get up high, prey probably pretty good" (Boyce)

-Not bad looking, not that high, but it's a nice rock

-Ground check recommended

HELICOPTER RESULTS

SITE NAME: BILLY'S PEAK

SITE NUMBER: 105

DATE VISITED: 4/13/79

TIME OF ARRIVAL: 1501

TOTAL TIME AT SITE: 3 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 59-89 m (200-300 ft)

TOTAL SCORE: 3.0

CLIFF SCORE: 2.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality	x					
Ledge Location						
Enhancement Potential						
Human Disturbance			x			
Overall Impression	x	x		x		

COMMENTS:

-Elevation 6800 ft

-Lots of good cliff, snow around it

-Most ledges still snow covered

-Overal impression: elevation too high, snow covered, falcons not here

-Not worth rechecking

-Rate: #1-2

-Proximity to water: 2.5 miles

HELICOPTER RESULTS

SITE NAME: COLD GULCH

SITE NUMBER: 106

DATE VISITED: 4/13/79

TIME OF ARRIVAL: 1505

TOTAL TIME AT SITE: 3 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 84 m (300 ft)

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x					
Ledge Quality	x					
Ledge Location	x					
Enhancement Potential		x				
Human Disturbance	x					
Overall Impression	x					

COMMENTS:

-Small cliff, surrounded by roads; 300 ft, but not a very prominent cliff, sort of lays on hillside

-Best cliff is north facing

-Rate: #1 all the way; not worth ground check

-Unsuitable

-Elevation: 3800 ft

-Proximity to water: 1 mile

HELICOPTER RESULTS

SITE NAME: MT. EDDY

SITE NUMBER: 107

DATE VISITED: 4/13/79

TOTAL SCORE: 2.0

TIME OF ARRIVAL: 1520

CLIFF SCORE: 1.0

TOTAL TIME AT SITE: 7 min.

LEDGE SCORE: 1.0

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT: 14-84 m (50-300 ft)

STATUS: Unsuitable/Pot

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

-Elevation 8700 ft, all slopes & ledges snow covered, 10 miles to major river

-Series of cliffs & peaks ranging from 25-300 ft, with various aspects

-Small cliff, overlooks lake, must nest later in year, lots of snow, series of peaks, faces almost directly south, 25 ft high, no good ledges

-One little roosting spot with whitewash

-"I'd rate it mayself about a #1, although there could be peregrines there with young later on in the year"

-Northeast facing cliff-snow covered, rock less than 50 ft

-Nice basin here; rock is dike-like, no ledges, 300 ft cliff

-East facing cliff- vertical cracks, very sharp, few ledges, snow covered

-Whole ridgeline area: possible to poor, really snowbound, would have to nest quite late

HELICOPTER RESULTS

SITE NAME: MT SHASTA/ASH CREEK

SITE NUMBER: 108

DATE VISITED: 4/13/79

TOTAL SCORE: 3.0

TIME OF ARRIVAL: 1608

CLIFF SCORE: 1.5

TOTAL TIME AT SITE: 1 min.

LEDGE SCORE: 1.5

RAPTORS SEEN: Prairie 3 miles away

GROUND VISIT: No

CLIFF HEIGHT: 43 m (130 ft)

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

-Prairie Falcon flew over about 3 miles from site #108

-About 130 ft cliff, snow covered, habitat doesn't look that good

-Elevation 7900 ft, extremely cold

-May be occupied later in year

-Not to worry about ground check unless you come back in late July

-Proximity to water: 9 miles

HELICOPTER RESULTS

SITE NAME: GRAY BUTTE

SITE NUMBER: 109

DATE VISITED: 4/13/79

TIME OF ARRIVAL: 1612

TOTAL TIME AT SITE: 2.5 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x					
Ledge Quality	x					
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression	x					

COMMENTS:

-Awfully crumbly, very loose rock

-No ledges

-Elevation 8,000 ft

-Band-tailed Pigeons here

-Not worth checking

-Proximity to water: 7 miles

HELICOPTER RESULTS

SITE NAME: CASTLE CRAGS

SITE NUMBER: 110

DATE VISITED: 4/14/79
4/13/79

TIME OF ARRIVAL: 0823
1622

TOTAL TIME AT SITE: 7 min.
1.5 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 6.0

CLIFF SCORE: 3.0

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Historical
Active - 1979

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality			x			x
Ledge Location			x			x
Enhancement Potential						
Human Disturbance						
Overall Impression			x			x

COMMENTS:

-Lots of ledges, mostly vertical, very few cracks

-Massive, massive rocks, whitewash in a crack, several good ledges

-Theres a tremendous amount to look at here, many ledges

-Whitewash with overhang above it

-3 overhangs in a row- a bird standing on ledge/pothole (falcon?)

-E. O. Wenzel saw peregrines at Castle Crags on 4 April 1979,1635 hours

HELICOPTER RESULTS

SITE NAME: YELLOWJACKET MOUNTAIN

SITE NUMBER: 111

DATE VISITED: 4/14/79

TOTAL SCORE: 3.5

TIME OF ARRIVAL: 0835

CLIFF SCORE: 1.5

TOTAL TIME AT SITE: 2 min.

LEDGE SCORE: 2.0

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT: 23-59 m (80-200 ft)

STATUS: Pot/Pos

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x				x	
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance			x			
Overall Impression	x				x	

COMMENTS:

-High on mountain, along a ridge

-Below snow line

-Metamorphic rock

-Faces off in a westerly direction, about 200 ft high, slopes at 75-80° angle

-North side of rock has 1 face, 80 ft, low cliffs tilted and uplifted at 45° angle; 1 ledge on that side

-Around the corner-no vertical faces

-Overall impression: #2; not worth checking by foot

-Elevation: 4600 ft; Proximity to water: 5 miles

HELICOPTER RESULTS

SITE NAME: HAT MOUNTAIN

SITE NUMBER: 112

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 0811

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: Red-tailed Hawk

CLIFF HEIGHT:

TOTAL SCORE: 3.0

CLIFF SCORE: 1.5

LEDGE SCORE: 1.5

GROUND VISIT: No

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability				x		
Ledge Quality				x		
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression		x		x		

COMMENTS:

-Not really a prominent cliff but it's located at a high point, has a commanding view; subjective rating: #2

-Cliff very short, very few ledges, whitewash

-Bottom tier of cliffs looks like weathered granitic rock, metamorphic

-Lower cliff looked the best in terms of ledge availability, although it did have a northwest exposure

-Red-tailed Hawk soaring near cliff

-Elevation: 4,000 ft

-Proximity to water: 9.5 miles

HELICOPTER RESULTS

SITE NAME: BOLLIBOKKA

SITE NUMBER: 113

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 0804

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 15 m (50 ft)

TOTAL SCORE: 3.0

CLIFF SCORE: 1.5

LEDGE SCORE: 1.5

GROUND VISIT: No

STATUS: Unsuit/Pot

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x				x	
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

-Vertical faces, 50 ft

-Very few ledges, small whitewash perch

-Metamorphic bunch of fractured rock

-Not worth checking

-Doesn't look very suitable

-Elevation: 3600 ft

-Proximity to water: 2 miles

HELICOPTER RESULTS

SITE NAME: MCCLOUD BRIDGE

SITE NUMBER: 114

DATE VISITED: 4/14/79

TOTAL SCORE: 5.5

TIME OF ARRIVAL: 0804

CLIFF SCORE: 2.5

TOTAL TIME AT SITE: 2 min.

LEDGE SCORE: 3.0

RAPTORS SEEN: No

GROUND VISIT: Yes

CLIFF HEIGHT: 84 m (300 ft)

STATUS: Highly Suspected

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality			x			x
Ledge Location						
Enhancement Potential						
Human Disturbance		x				
Overall Impression			x		x	x

COMMENTS:

-Extension of limestone ridges, 300 ft cliff

-Has lots of perspective, #3 all around

-Not very vertical face, 60-75 ft at most, very crumbly, like rest of N. Gray Rock area

-Many ledges

-North end: very vertical, 200-300 ft

-West face: very steep but has shelf effect, bobcat could walk along it, not many ledges available

-Looks like a nice Prairie Falcon cliff

-Lots of whitewash, perch site, not very vertical

HELICOPTER RESULTS

SITE NAME: NORTH GRAY ROCKS

SITE NUMBER: 115

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 0742

TOTAL TIME AT SITE: 10 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 29-117 m (100-400 ft)

TOTAL SCORE: 6.0

CLIFF SCORE: 3.0

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Historical
Highly Suspected - 1979

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality			x			x
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression			x			x

COMMENTS:

-Fantastic looking limestone rock

-Lots of horizontal fracturing, mostly low cliffs on south side overlooking Shasta, scattered trees

-Certainly a 1st class cliff, several nice whitewash areas, long history of use, great ledge, massive rock

-Whitewash perch off to left, whitewash pinnacles, vertical crack, plenty of ledges down there on vertical face

-Saw a quick shot of a bird that flew out of my view, might have been a falcon

-No birds found on N. Gray Rocks; the breeding cycle is such that they're likely on eggs and aren't coming off

HELICOPTER RESULTS

SITE NAME: GRAY ROCKS

SITE NUMBER: 116

DATE VISITED: 4/14/79

TOTAL SCORE: 3.75

TIME OF ARRIVAL: 0938

CLIFF SCORE: 1.75

TOTAL TIME AT SITE: 4 min.

LEDGE SCORE: 2.0

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT: 11-29 m (35-100 ft)

STATUS: Possible/Pot

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability		x			x	
Ledge Quality	x				x	
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression				x	x	

COMMENTS:

-Nothing vertical here, fractured

-Ledges are accessible

-Extensive lime rocks here- not much sign of activity

-Very short, accessible, most vertical rock is back on #117

-East side: 50 ft, no ledges, very fractured

-Southeast side: a couple of potholes, nothing over 100 ft, mostly 50 ft

-Elevation: 3000 ft

-Proximity to water: 1.5 miles

HELICOPTER RESULTS

SITE NAME: DEVIL'S ROCK

SITE NUMBER: 117

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 0935

TOTAL TIME AT SITE: 2.5 min.

RAPTORS SEEN: female Golden Eagle

CLIFF HEIGHT:

TOTAL SCORE: 5.0

CLIFF SCORE: 2.0

LEDGE SCORE: 3.0

GROUND VISIT: No

STATUS: Possible
(Unsuitable in 1979 due to nesting G. Eagles)

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality						x
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression		x			x	x

COMMENTS:

-Flock of Band-tailed Pigeons

-Adult female Golden Eagle on south end of rock, didn't budge, nest around corner

-Limestone outcrop again

-East section very short- 60 ft

-Nice vertical cliff, flecks of whitewash on that ledge

-Mossy ledges all along

-Caves

HELICOPTER RESULTS

SITE NAME: BROCK BUTTE

SITE NUMBER: 118

DATE VISITED: 4/14/79

TOTAL SCORE: 3.0

TIME OF ARRIVAL: 0934

CLIFF SCORE: 2.0

TOTAL TIME AT SITE: 1 min.

LEDGE SCORE: 1.0

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT: 9-12 m (30-40 ft)

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression	x	x				

COMMENTS:

-Rather fractured, shallow, 30-40 ft

-Moving up backbone, drainage

-Could be a little whitewash or mineralization

-Very short, fractured vertically, no ledges on that stretch

-Elevation: 2250 ft

-Proximity to water: 4.5 miles

HELICOPTER RESULTS

SITE NAME: MCKENZIE MOUNTAIN

SITE NUMBER: 119

DATE VISITED: 4/14/79

TOTAL SCORE: 3.0

TIME OF ARRIVAL: 0845

CLIFF SCORE: 2.0

TOTAL TIME AT SITE: 1 min.

LEDGE SCORE: 1.0

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT:

STATUS: Possible
Highly Suspected-for
Prairie Falcons

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability				x		
Ledge Quality					x	
Ledge Location					x	
Enhancement Potential				x		
Human Disturbance						x
Overall Impression						

COMMENTS:

-This site is a "sleeper" in the Squaw Creek - Shoenhorse area

-Short cliff, oak trees growing along the side, one vertical face - NE side batch of whitewash, dribbles all over, lots of perches

-Metamorphic rock, pretty nice ledges, little bit of whitewash on cliff

-Lots of perches, but that's about it

-Not worth coming back to

-Elevation: 4500 ft

-Proximity to water: 4.5 miles

HELICOPTER RESULTS

SITE NAME: DEVIL'S MOUNTAIN

SITE NUMBER: 120

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 0855

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: Golden Eagle

CLIFF HEIGHT: 14 m (50 ft)

TOTAL SCORE: 3.0

CLIFF SCORE: 1.5

LEDGE SCORE: 1.5

GROUND VISIT: No

STATUS: Unsuit/Pot

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x				x	
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression	x			x	x	

COMMENTS:

-"It looks better from far away"

-Taking a look at some of the short stuff near top - very short; this cliff is 50 ft at most - nothing there - no ledges

-Next cliff very short also; there's a Golden Eagle

-This cliff doesn't merit coming back to - it's pretty crummy

-Elevation: 3500 ft

-Proximity to water: 5.5 miles

HELICOPTER RESULTS

SITE NAME: N.E. DEVIL'S MOUNTAIN/MUSHROOM ROCK AREA

SITE NUMBER: 121

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 0858

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT: 9-12 m (30-40 ft)

TOTAL SCORE: 2.0

CLIFF SCORE: 1.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location						
Enhancement Potential						
Human Disturbance			x			x
Overall Impression	x			x		

COMMENTS:

-Layered sedimentary rock, probably metamorphic, 30-40 ft high

-No ledges to speak of, looks poor

-Overall rating: #1

-Elevation: 5000 ft

-Proximity to water: 6 miles

HELICOPTER RESULTS

SITE NAME: SKUNK RIDGE/YELLOW SLIDE

SITE NUMBER: 122

DATE VISITED: 4/14/79

TOTAL SCORE: 3.5

TIME OF ARRIVAL: 0906

CLIFF SCORE: 2.0

TOTAL TIME AT SITE: 4 min.

LEDGE SCORE: 1.5

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT: 30 m (100 ft)

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White 1	White 2	White 3	Boyce 1	Boyce 2	Boyce 3
Ledge Availability	x				x	
Ledge Quality	x			x		
Ledge Location						
Enhancement Potential					x	
Human Disturbance						
Overall Impression	x				x	

COMMENTS:

-Little cliff, metamorphic rock, elevation: 3600 ft, 1.5 miles to river

-A real sleeper, 100 ft high

-Green lichen, a little whitewash in a couple areas, hard to tell what's been using it

-There are some ledges, no birds flying off of the cliff though

-Same area; going down into a bowl now, ledges sloping down off cliffs 60-70 ft tall, very fractured vertically , no whitewash on these cliffs

-Skunk Ridge is vertical enough in some places but lacks ledges

-No real ledges in there, tree gorwth on side; enhancement potential for artificial ledge

HELICOPTER RESULTS

SITE NAME: PIT RIVER POWERHOUSE #4

SITE NUMBER: 123

DATE VISITED: 4/14/79

TOTAL SCORE: 5.0

TIME OF ARRIVAL: 0912

CLIFF SCORE: 2.0

TOTAL TIME AT SITE: 4 min.

LEDGE SCORE: 3.0

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT: 59 m (200 ft)

STATUS: Historical
Active 1979

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality			x			x
Ledge Location			x			x
Enhancement Potential						
Human Disturbance	x			x		
Overall Impression			x		x	

COMMENTS:

-Lots of human disturbance in this area

-We're coming up to the cliff; there are a lots of ledges in here

-Lots of whitewash, but no sign of peregrines

-Swifts here, no sign of falcons

-"That falcon's probably so used to helicopters that he doesn't pay any attention. We Land there all the time (at the Powerehouse)," B. Train-pilot

-Elevation: 2600 ft, overlooks river

-Habitat: conifer

ST-35

HELICOPTER RESULTS

SITE NAME: DEEP CREEK/BALES MOUNTAIN

SITE NUMBER: 124

DATE VISITED: 4/14/79

TOTAL SCORE: 6.0

TIME OF ARRIVAL: 0917

CLIFF SCORE: 3.0

TOTAL TIME AT SITE: 3 min.

LEDGE SCORE: 3.0

RAPTORS SEEN: Golden Eagle nest

GROUND VISIT: Yes

CLIFF HEIGHT: 22-59 m (75-200 ft)

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality			x			x
Ledge Location		x	x		x	x
Enhancement Potential						
Human Disturbance		x			x	
Overall Impression			x			x

COMMENTS:

-Northeast of Rit River, on east side, low relief

-Red-tailed Hawk flying along

-Broken cliffs: many, many ledges; quality's there

-This set of cliff look pretty good (upriver from Chalk Bluff)
Lots of ledges and whitewash; several hundred feet

-This is great; cliffs are getting bigger (75-100 ft) ledges throughout;
falcons could be in here anywhere; should be ground-checked

-Old Golden Eagle nest; no Golden Eagles seen

HELICOPTER RESULTS

SITE NAME: PIT RIVER POWERHOUSE #5

SITE NUMBER: 125

DATE VISITED: 4/14/79

TOTAL SCORE: 3.0

TIME OF ARRIVAL: 0925

CLIFF SCORE: 1.5

TOTAL TIME AT SITE: 1 min.

LEDGE SCORE: 1.5

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT:

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

-There's a little cliff just by the powerhouse that's got whitewash on it; can't tell what it's from; doesn't look too good

-Probably not worth re-checking

-Cliff right along Pit River, below Pit #5, a little waterfall

-Elevation: 2200 ft, overlooks river

HELICOPTER RESULTS

SITE NAME: SUGARLOAF CREEK

SITE NUMBER: 200

DATE VISITED: 4/13/79

TIME OF ARRIVAL: 1431

TOTAL TIME AT SITE: 4 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: *

CLIFF SCORE: *

LEDGE SCORE: *

GROUND VISIT: No

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression						

COMMENTS:

*Not worth analysis

-Elevation: 2500 ft

-Proximity to water: 3 miles

HELICOPTER RESULTS

SITE NAME: CHARLIE CREEK

SITE NUMBER: 201

DATE VISITED: 4/13/79

TIME OF ARRIVAL: 1436

TOTAL TIME AT SITE: 2 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 4.0

CLIFF SCORE: 1.0

LEDGE SCORE: 3.0

GROUND VISIT: Yes

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			
Ledge Quality						
Ledge Location			x			
Enhancement Potential						
Human Disturbance		x				
Overall Impression		x				

COMMENTS:

-Lower set of cliffs: north end of drainage

-This whole set of cliffs is somewhere between possible and unsuitable; lack of cliffs when we consider what is being used elsewhere, these are very poor, yet they do have a lot of ledges

HELICOPTER RESULTS

SITE NAME: SUGAR PINE CREEK

SITE NUMBER: 203

DATE VISITED: 4/13/79

TOTAL SCORE: 3.0

TIME OF ARRIVAL: 1456

CLIFF SCORE: 1.5

TOTAL TIME AT SITE: 2 min.

LEDGE SCORE: 1.5

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT:

STATUS: Unsuitable/Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x	x				
Ledge Quality	x	x				
Ledge Location	x	x				
Enhancement Potential						
Human Disturbance			x			
Overall Impression	x	x				

COMMENTS:

-5 miles from tip of lake to north of Sugar Pine Butte 1-2 miles

-Southeast face looks good

-High elevation: 7200 ft, completely snow covered at base; rather striking looking cliff, but probably unsuitable

-Most of cliffs at fractured angle, rather than straight

-Good ledge material, vertical, rather high, several drainages to forage over, much fracturing, plenty of ledge material

-No birds flushing, no whitewash, really unsuitable, too high, snow all over

ST-40

HELICOPTER RESULTS

SITE NAME: WHALEBACK (OFF FOREST)

SITE NUMBER: 205

DATE VISITED: 4/13/79

TIME OF ARRIVAL: 1536

TOTAL TIME AT SITE: 8 min.

RAPTORS SEEN: Prairie Falcons

CLIFF HEIGHT: 44 m (150 ft)

TOTAL SCORE: 6.0

CLIFF SCORE: 3.0

LEDGE SCORE: 3.0

GROUND VISIT: No

STATUS: Possible

Active: Prairie Falcons- 1979

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability			x			x
Ledge Quality			x			x
Ledge Location		x	x		x	x
Enhancement Potential						
Human Disturbance		x			x	
Overall Impression			x			x

COMMENTS:

-Elevation: 4500 ft, Habitat: pinyons

-Historical site for Prairie Falcons (R. L. Garrett), confirmed active with prairies in 1976 (S. & J. Boyce)

-Volcanic rock, potholes all over, high quality cliff, lots of ledges

-Whitewash abundant, 3 stick nests, 1 stick nest looks like ravens are using it

-Lots of perches available

-Two Prairie Falcon tiercels flushed off of cliff, one used same kind of evasive tactics used by peregrines

-May have 2-3 Prairie Falcon eyries here

-Overall impression: #3 set of cliffs

HELICOPTER RESULTS

SITE NAME: RAMSHORN SUMMIT

SITE NUMBER: 206

DATE VISITED: 4/13/79

TOTAL SCORE: 2.0

TIME OF ARRIVAL: 1510

CLIFF SCORE: 1.0

TOTAL TIME AT SITE: 1.75 min.

LEDGE SCORE: 1.0

RAPTORS SEEN: None

GROUND VISIT: No

CLIFF HEIGHT: 15-44 m (50-150 ft)

STATUS: Unsuitable

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x			x		
Ledge Quality	x			x		
Ledge Location	x			x		
Enhancement Potential	x			x		
Human Disturbance						
Overall Impression	x			x		

COMMENTS:

-Small 150 ft cliff just above mining cliff, back in pines, almost a "sleeper"

-Elevation 4700-4800 ft, snow on all ledges

-Rating: #1 all around, not worth coming back, cliff isn't vertical, no whitewash, not even perches; ledges not horizontal, no nesting signs

-Short, 45° angle cliff, no ledges whatsoever

-Proximity to water: 4 miles

HELICOPTER RESULTS

SITE NAME: BIG BAR/WEAVERVILLE A

SITE NUMBER: 208

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1507

TOTAL TIME AT SITE: 3.75 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 4.0

CLIFF SCORE: 2.0

LEDGE SCORE: 2.0

GROUND VISIT: Yes

STATUS: Possible

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability						
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression		x			x	

COMMENTS:

-Metamorphic rock, cliff runs about 200 yards, nice sheer rock, faces south

-West facing slope- very small (20 ft) & broken

-One large face, several ledges, whitewash up in corner, accessible though

-Wanted to take another look, with helicopter, but wind was too strong

-The one good cliff is a vertical one; the rest above it are highly fractured and laying at a 70° angle

-Elevation: 3500 ft

-Proximity to water: 3 miles

HELICOPTER RESULTS

SITE NAME: BIG BAR/WEAVERVILLE B

SITE NUMBER: 209

DATE VISITED: 4/14/79

TIME OF ARRIVAL: 1512

TOTAL TIME AT SITE: .5 min.

RAPTORS SEEN: None

CLIFF HEIGHT:

TOTAL SCORE: 3.0

CLIFF SCORE: 2.0

LEDGE SCORE: 1.0

GROUND VISIT: No

STATUS: Potential

COMMENTS AND EVALUATIONS OF CLIFF

	White			Boyce		
	1	2	3	1	2	3
Ledge Availability	x					
Ledge Quality						
Ledge Location						
Enhancement Potential						
Human Disturbance						
Overall Impression		x				

COMMENTS:

-Upper cliff- a little whitewash, no ledges

-One angular ledge, accessible to predators & humans

-Only "potential"

-Doesn't merit ground check

-Site west of Weaverville 10 miles

GROUND RESULTS

SITE NAME Devils Hole Gulch

SITE NUMBER 25

		Dates Visited
Forest Name	Trinity	no helicopter visit
Aerial Photo #	43-50-86	6/20/79
Aerial Photo Rating	B	
Quadrangle	Yolla Bolly	
Legal Descrip.	T27N,R9W,S32	
Elevation	3600	
Cliff Height	80' (23m)	
Cliff Aspect	SSE	
Final Classification	Potential	

PREY NOTED: Dark-eyed Junco, Pine Siskin, Yellow-bellied Sapsucker redrace, White-headed Woodpecker, Stellars Jay, Scrub Jay, Hermit Warbler, Western Tanager, common Flicker, Mountain Bluebird, Hairy Woodpecker, Rufous-sided Towhee, Common Bushtit.

RAPTORS NOTED: Red-tailed Hawk, Common Raven.

FEEDINT HABITAT AVAILABILITY AND QUALITY: Very Good. Good riparian habitat. Though not close to a large river the site is on the head-waters of Cottonwood Creek and the surrounding area is laced with creeks. Abundant stands of timber: north slope Lazyman Ridge, east slope Devils Hole Ridge, 2/3 of the way down Long Ridge. Predominantly brushy on south slope Sanford Ridge, lower 1/3 of Long Ridge, lower 1/2 of north slope above Cottonwood. High peak areas of North and South Yolla Bolly Mtns. have extensive mountain meadows and scree areas. Good habitat diversity. Ecotones present.

SITE RELATION TO WATER: The rock is located overlooking Cottonwood Creek on the north side 1 mile east of its confluence with Devils Hole Gulch. The Middle Fork of the Eel drainage begins west side of Devils Hole Ridge 3.5 miles s.w. The area to north and east of site is heavily cut with drainages.

DISTURBANCE POTENTIALS: The site is located inside the Yolla Bolly Middle Eel Wilderness Area 2 miles south of the north border. Disturbance in the immediate vicinity is confined to hiker use of trail along Cottonwood Creek adjacent to the rock. Timber cutting is taking place just outside the wilderness area 2-3 miles northeast of the site near Low Gap.

FACTORS FOR PEREGRINE ESTABLISHMENT: Peregrine activity has been noted in the Tomhead Mtn vicinity 5-6 miles due east (see site #26). Diverse feeding habitat. The rock is located close to many small streams and a major creek. It has a south southeast aspect, effective height above river about 200 yards.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: The rock is small in vertical height, about 80 feet, and lacks potholes and ledges that would provide adequate eyrie space. The rock is easily seen from the trail and provides an interesting diversion for the backpacker; the top is easily reached by a short unobstructed walk and has a good view of the valley. Some areas of the rock may have access to mammalian predators.

MANAGEMENT RECOMMENDATIONS: Instruct the Wilderness Guard in the area to keep a lookout for peregrine activity. Peregrines have been noted in this area and may be residing somewhere in the wilderness area. The lack of suitable nesting rock at this site makes further effective management unfeasible.

DIRECTIONS TO THE SITE: From Red Bluff, west on Walnut Street to flashing yellow light, left, then right on Reeds Ridge Rd. to Pettyjohn Rd. and turn left to Tomhead Mtn. vicinity. Turn left at turnoff to Saddle Camp Guard Station and follow to Tomhead Saddle. Park and hike trail down Syd Cabin Ridge to Hawk Camp, then follow trail along Cottonwood Creek to 1 mile east of confluence with Devils Hole Gulch.

ENHANCEMENT POTENTIAL: There is one crack in the rock that could accommodate an artificial platform. However small size of the rock would probably discourage nesting attempts by peregrine falcons. Very low priority site for enhancement.

GROUND RESULTS

SITE NAME Tomhead Mountain/Cottonwood Creek

SITE NUMBER 26

		Dates Visited
Forest Name	Trinity	
Aerial Photo #	50-135	6/19/79
Aerial Photo Rating	B	6/21/79
Quadrangle	Yolla Bolly	
Legal Descrip.	T26N,R8W,S9	
Elevation	5500	
Cliff Height	300-400' (88-118m)	
Cliff Aspect	S and E	
Final Classification	Highly Suspected	

PREY NOTED: California Quail, Black-headed Grosbeak, Robin, Ash-throated Flycatcher, Western Tanager, Mourning Dove, Stellars Jay, Common Flicker, Dark-eyed Junco, Violet-green Swallow, Lazuli Bunting, Western Kingbird..Local landowner says there is a heavy influx of Band-tailed Pigeons in the fall.

RAPTORS NOTED: Golden Eagle, Red-tailed Hawk, Turkey Vulture, Kestral.

FEEDING HABITAT AVAILABILITY AND QUALITY: Excellent habitat diversity. Abundant ecotone. Good riparian habitat along the Cottonwood and Hamilton Gulch: oaks and deciduous brush. South side of Tomhead has much re-growth grass and brush resulting from a fire several years ago, open meadow at Hamilton Glade. North side of Tomhead is heavily timbered 1/2 down from top, then a zone of predominantly hardwoods and brush, then brush and grasses. Meadows on ridge south of Cottonwood directly opposite site, stands of timber to west, getting quite dry to the east with much bare soil and scattered brush and hardwoods. There are a number of rocky masses in the area for hunting perches: on top of Nuisance Ridge, on the north side of Tomhead, and on top of Trough Springs ridge.

SITE RELATION TO WATER: The site lies overlooking S.F. Cottonwood Creek at the confluence of Hamilton Gulch.

DISTURBANCE POTENTIALS: A timber cut of 1-2 million board feet is taking

place at this time in Section 7 on the north side of Trough Springs Ridge 1.5 miles west of the site; well within earshot during ground survey. This could have discouraged peregrine activity at the site this year. Ground spraying of herbicides by the F.S. occurred on Nuisance Ridge just east of Tomhead summit earlier this spring, according to Dennis Knight (USFS). F.S. is now planning a timber cut of some 13 million board feet in area 3 miles n.w. of Tomhead bordering Yolla Bolly-Middle Eel Wilderness, however if the operation is out of earshot the impact to the site should be minimal. Don Mecchi, co-landowner of small parcel on south side of Tomhead Mtn. reports that F.S. is planning to expand and extend the road to Hamilton Glade (to within 1/4-1/2 mile of site) to increase public access; road-building and increased activity could severely impact the site. However, with proper management this site could have low disturbance potential (see Management Recommendations). Major threat would be ease of access to top of rocks via Hamilton Gulch.

FACTORS FOR PEREGRINE ESTABLISHMENT: Excellent prey base, good relation to water. The rock has good effective height. Peregrine sightings in the area: Phil Dietrich and Alan Craig (USFS) confirmed an adult peregrine at Hamilton Glade May 17-19, 1978. Don Mecchi reports seeing peregrines in the fall of 1977 and says that other local landowners (Steve Maddox, Hub Schumaker) have also seen peregrines in the area including this year. Mecchi also reports that Don Kelly, a biologist with the D.F.G., observed 2 peregrines in the vicinity 7/29-8/1/78 and that a report of his sightings was submitted to the F.S.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: The rock is composed of broken jumbled masses 3-400' in total height but with vertical faces much smaller. Ledges could not be noted due to lack of direct view of rock. There is much golden eagle activity in the area: adults and immatures were observed during ground check soaring over Tomhead Mtn. and also several miles north at junction of Hammer Loop Road and Pettyjohn Rd. Golden eagles nested in 1978 on Trough Springs Ridge (D. Harlow, USFWS).

MANAGEMENT RECOMMENDATIONS: Check the site yearly for continued sign of peregrine activity. Avoid further use of herbicides on Tomhead Mtn. Permit further logging in the vicinity only from the end of June to mid-February to prevent disturbance to establishing falcons. Do not expand or extend road to Hamilton Glade; Hamilton Gulch is recovering from a forest fire and public access is not of prime importance. Instead, close this road to unauthorized entry from mid-February to late June to discourage access to the top of the rock and generally to minimize disturbance.

DIRECTIONS TO THE SITE: See Site #25. From Tomhead Saddle proceed past Tomhead L.O. turnoff to gate to private parcel. Proceed through gate (may need F.S. key) and take first left hand fork then second left hand fork to Hamilton Glade. Hike to top of rocks at Hamilton Gulch/Cottonwood confluence. Direct view of rock may be had from road on Elkhorn Ridge opposite site (#26N01) from Valentine Ridge Rd. access; or from trail on opposite ridge though beginning is on private land, no passage without permission. The site can also be seen from Hammer Loop Road with a strong spotting scope, Celestron or Questar.

ENHANCEMENT POTENTIAL: Not able to be addressed from ground check because the site was observed from the top of the rock.

CONCLUDING COMMENTS: Two peregrine sightings by qualified biologists at this site and numerous sightings reported by local landowners make it

highly suspected for peregrine activity. However, helicoptor and ground check this year by this survey, and a visit to the site earlier in the season by Phil Dietrich (USFS) and Dave Harlow (USFWS) failed to produce further sightings. There is the possibility that these sightings are of birds occupying the Yolla Bolly-Middle Eel Wilderness area 2 miles to the west, which are coming to lower elevations in the late summer and fall.

GROUND RESULTS

SITE NAME Kingfisher Point

SITE NUMBER 93

		Dates Visited
Forest Name	Trinity	
Aerial Photo #	27-25-144	5/22/79
Aerial Photo Rating	C	
Quadrangle	Pickett Peak	
Legal Descrip.	T1S,R7&8E,S11	
Elevation	4200	
Cliff Height	vertical faces 60-80' (18-23m)	
Cliff Aspect	S and SW	
Final Classification	Potential	

PREY NOTED: Black-headed Grosbeak, Stellars Jay, Common Flicker, Mountain and Valley Quail, Acorn Woodpecker, Nuthatch sp. Area is normally good for band-tailed pigeons according to locals but none were observed.

SITE RELATION TO WATER: The South Fork of the Trinity River flows from east to west directly below and on the south side of the cliffs.

DISTURBANCE POTENTIALS: There is considerable use of the river by vacationers and fishermen, but usually later in the spring. Hwy. 36 passes below the cliffs on the opposite side of the river. Traffic is usually light. Currently there is a highway expansion project on that part of the highway with heavy machinery in operation, close enough to the cliffs to have discouraged any occupation this year. Access to the rock by foot would be extremely difficult.

FACTORS FOR PEREGRINE ESTABLISHMENT: South-facing cliff overlooking a major river. Below 5000 feet. It is less than six miles to a known site. Effective height is good.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: There is a great deal of rock present consisiting mostly of dark, unconsolidated rock probably of volcanic origin. It lacks high, vertical faces with good ledges. Suitable appearing ledges occur low on the rock, but may be accessible to predators.

MANAGEMENT RECOMMENDATIONS: The site could be checked periodically for sign of raptor activity. This is a low priority site for management due to very low suitability of rock.

DIRECTIONS TO THE SITE: Cliffs can be seen from Hwy. 36 just west of Forest Glen looking north.

ENHANCEMENT POTENTIAL: The rocks have many cracks and fissures which could accomodate an artificial platform or other modifications.

GROUND RESULTS

SITE NAME Marble Caves

SITE NUMBER 93A

		Dates Visited
Forest Name	Trinity	
Aerial Photo #	27-25-144	5/21-22/79
Aerial Photo Rating	B	
Quadrangle	Pickett Peak	
Legal Descrip.	T1S,R7&8E,S7&12	
Elevation	4000	
Cliff Height	n. cliff: 75' (22m), s. cliff: 125' (37m)	
Cliff Aspect	W, S, SW	
Final Classification	Highly Suspected	

PREY NOTED: Black-headed Grosbeaks and Stellars Jays most common, Robin, Common Flicker, Dark-eyed Junco, Nutcracker, Chickadee sp., Woodpecker species, other small songbirds heard but not seen. Domestic Pigeons; and local residents inform that Band-tailed Pigeons are common but none were observed during ground check.

RAPTORS NOTED: None.

FEEDING HABITAT AVAILABILITY AND QUALITY: Habitat is 90% mixed conifers with oak, madrone, maple, and manzanita in places. Subjectively, prey availability is fair but adequate.

SITE RELATION TO WATER: Cave Creek flows immediately below the cliffs on the west side from north to south and enters the South Fork of the Trinity River about one mile below.

DISTURBANCE POTENTIALS: Indian Valley Road comes to within 100 yards of the top of one of the cliffs and there is a trail that leads from it to the caves; however the rock is mostly obscured from the trail by vegetation, and it is not believed that many people visit the caves early in spring. There is marketable timber around the cliffs, therefore future logging may pose some disturbance potential. In 1979 there was heavy equipment in use on highway expansion on Hwy. 36 directly below the cliffs during ground check, however it could only barely be heard from the cliffs.

FACTORS FOR PEREGRINE ESTABLISHMENT: Dominant west and south and soutwest facing cliffs overlooking a major river. Vertical faces not large but good effective height. Cliffs are of limestone and sandstone substrate with a number of ledges noted (see drawings) though most are on lower 1/3 of cliffs. South limestone cliff has a large pothole on upper 1/3 with what appears to be whitewash; whitewash present other locations as well. Site is only 7 miles from a known active site (#37).

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Potentials for human disturbance; there are many logging roads and trails in the area; rock is easily accessible to persons on foot.

MANAGEMENT RECOMMENDATIONS: Site should be checked each year for raptor activity--whitewash indicates rock is being used. Should peregrine occupation or establishment occur steps should be taken to reduce human impact in the area. Logging or road work in the near vicinity should be avoided in the spring.

DIRECTIONS TO THE SITE: From Hwy. 36 just east of Forest Glen take the Indian Valley Road to the north. About 1/2 mile past a sign marked "Marble Caves Trail" park and walk down 100 yards to the top of one of the rocks.

ENHANCEMENT POTENTIAL: There is an overhang without a ledge below on north limestone cliff which might accommodate an artificial ledge. There are sufficient ledges, however, to make enhancement low priority. Observe closely first for several years, for additional sign of raptor activity.

GROUND RESULTS

SITE NAME Little Bear Wallow Creek

SITE NUMBER 94

		Dates Visited
Forest Name	Trinity	
Aerial Photo #	26-15-38	5/23/79
Aerial Photo Rating	B	6/5/79
Quadrangle	Pickett Peak	
Legal Descrip.	T1N,R7E,S33	
Elevation	2700	
Cliff Height	n. rock: 150' (44m)	
Cliff Aspect	n. rock: S-SW; s. rock: N	
Final Classification	Possible	

PREY NOTED: Robins and Mourning Doves especially numerous. Band-tail and Domestic Pigeons, Stellars Jay, Black-headed Grosbeak, Mountain and Valley Quail, Meadowlark, Blackbird, Common Flicker, Woodpecker sp., Northern Oriole, and other small songbirds also common. Prey availability very good.

RAPTORS NOTED: None.

FEEDING HABITAT AVAILABILITY AND QUALITY: Habitat at L. Bear Wallow Creek is mixed hardwood-coniferous forest with good shrub growth in the understory, especially thick in the canyon. South Fork Mtn. across the S.F. Trinity River is predominantly coniferous (75%) with clear-cuts and open meadows at Hidden Valley Ranch. A diverse habitat allows for a great diversity of prey species.

SITE RELATION TO WATER: Little Bear Wallow Creek runs down a canyon from east to west between the cliffs, and enters the South Fork of the Trinity a mile or less from the cliffs.

DISTURBANCE POTENTIALS: Little or none. The mouth of the canyon at S.F. Trinity is privately-owned with no development planned. The slopes of the canyon are very steep and dense with vegetation near the creek, making access by foot extremely difficult. The immediate slopes may be too steep for logging, though many clear-cuts occur 3 miles to the east.

FACTORS FOR PEREGRINE ESTABLISHMENT: Adequate vertical face south to s.w. aspect. Effective height above creek is 300', cliff overlooks the creek approx. 1 mile from the S.F. Trinity, a major river. Some ledges noted. Excellent prey base. Little or no disturbance. Site is located only 6 miles from a known active site (#37).

FACTORS AGAINST PEREGRINE ESTABLISHMENT: The cliff lacks the dominant presence on the landscape so common of known peregrine sites. Suitability

of ledges noted not positive. No sign of recent raptor activity. A cliff directly opposite the south-facing cliff has a north aspect.

MANAGEMENT RECOMMENDATIONS: The site should be checked each year for occupation. Any future plans for logging, mining or road construction should be restricted to late June to early February. If peregrine occupation is observed, maintain current roadless state of Little Bear Wallow Creek Canyon.

DIRECTIONS TO THE SITE: Hwy. 36 to South Fork Mtn. Rd. turning north. Follow to Hidden Valley Ranch turnoff and observe from Ranch, preferrably through Questar or Celestron due to distance to cliff. Closer observation is extremely difficult due to rugged nature of canyon and dense vegetation obscuring visibility. Permission should be obtained from landowners ahead of time. One owner, Larry, owns Record Works in Eureka, or write the ranch.

ENHANCEMENT POTENTIAL: This is not a priority site for ledge enhancement. Dense brush and steep terrain would make such a procedure extremely difficult; also, probable ledges and lack of evidence of raptor use make it unwarranted at this time.

GROUND RESULTS

SITE NAME Plummer Creek/Friend Lake

SITE NUMBER 95

		Dates Visited
Forest Name	Trinity	
Aerial Photo #	26-15-49	5/24/79
Aerial Photo Rating	B	
Quadrangle	Pickett Peak	
Legal Descrip.	T1N,R7E,S3&10&14	
Elevation	2800	
Cliff Height	250-300' (74-88m)	
Cliff Aspect	S-SW	
Final Classification	Possible	

PREY NOTED: Mallards at Friend Lake, Stellars Jay, small songbirds heard but not seen. Birdlife in general was surprisingly scarce.

RAPTORS NOTED: Turkey Vulture, Red-tail Hawk.

FEEDING HABITAT AVAILABILITY AND QUALITY: Habitat is mixed hardwood and coniferous forest, some meadows nearby at Friendly Ranch. Prey availability was surprisingly low in vicinity of cliff. There is good forage on South Fork Mountain opposite site and lower in the Trinity drainage however, both of which are easily accessible.

SITES RELATION TO WATER: Plummer Creek lies 3/4 mile to the south, flowing from east to west, and enters the S.F. Trinity River about 2.5 miles west of the cliff. Friend Lake lies one half mile to the south. Headwaters of Plummer Creek in general area.

DISTURBANCE POTENTIALS: The area immediately east of the site is heavily laced with logging roads and has experienced heavy clear-cutting in the past; there is good timber below the cliff. This suggests that logging could pose future disturbance potential.

FACTORS FOR PEREGRINE ESTABLISHMENT: South to southwest facing cliff below 5000 feet, dominant on the landscape (site can be seen from across the valley on South Fork Mtn.). Close to a major river--Plummer Creek canyon and much of S.F. Trinity drainage visible from rock. Sandstone substrate with several ledges noted (see drawing). The site is only 10 miles from

a known active site (#37).

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Ledges may not be adequate.

MANAGEMENT RECOMMENDATIONS: Site should be checked each year for occupation. Could be considered for enhancement. Logging activities in the immediate area, above and below the cliffs, should be confined to the late summer and fall.

DIRECTIONS TO THE SITE: Take Hwy. 36 to Indian Valley Road (1 mile east of Forest Glen) to turnoff for Friend Lake. From the lake traverse the hillside to the north and the cliffs will come into view, about 1 mile.

ENHANCEMENT POTENTIAL: Rock is extensive with separate vertical faces, has vertical ridges and cracks, and some existing ledges. It is believed there are sites on the rock that would accommodate ledge enhancement.

GROUND RESULTS

SITE NAME Butter Creek Caves

SITE NUMBER 96

		Dates Visited
Forest Name	Trinity	
Aerial Photo #	25-15-141	5/24-25/79
Aerial Photo Rating	A	
Quadrangle	Hyampom	
Legal Descrip.	T2N,R7E,S4	
Elevation	3100	
Cliff Height	60-75' (18-22m)	
Cliff Aspect	S and SW	
Final Classification	Potential	

PREY NOTED: Black-headed Grosbeak, Stellars Jay, Common Flicker, Mountain Quail, other small songbirds heard. None were in abundance. No Band-tailed Pigeons noted.

RAPTORS NOTED: None.

FEEDING HABITAT AVAILABILITY AND QUALITY: Mixed hardwood-coniferous forest with manzanita and whitethorn in the understory. On the north-facing slope to the south of the cliff is a stand of old growth timber, very large fir, oak, and madrone. Some clear-cuts nearby to provide ecotones. Subjectively, prey did not appear abundant.

SITE RELATION TO WATER: Butter Creek flows between the cliffs on the n.w. side. It flows n.e. to s.w. into Indian Creek 2 miles to the s.w. Indian Creek enters the South Fork of the Trinity River 2.5 miles west of the cliffs.

DISTURBANCE POTENTIALS: The cliffs are in a logging area, with a stand of old growth timber nearby. Future logging in the area could pose disturbance potential.

FACTORS FOR PEREGRINE ESTABLISHMENT: South-facing cliff near major river system. Three possible ledges with overhangs noted (see drawing).

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Site is composed primarily of jumbled rocks with only two acceptable vertical faces, 60-75 feet in

height (see drawing). Ledges noted are not positive suitable. No evidence of raptor activity.

MANAGEMENT RECOMMENDATIONS: Check for occupation each year. Avoid logging and use of heavy machinery in the immediate vicinity during early spring. If occupation should occur, it may be necessary to post a guard while birds are present.

DIRECTIONS TO THE SITE: Take Indian Valley Road south from Hyampom about six miles. The cliffs are easily seen from the road.

ENHANCEMENT POTENTIAL: Small vertical faces and lack of evidence of raptor activity make this a low priority site for ledge enhancement.

GROUND RESULTS

SITE NAME Big Slide

SITE NUMBER 97

		Dates Visited
Forest Name	Trinity	
Aerial Photo #	22-16-77	5/25-26/79
Aerial Photo Rating	B	
Quadrangle	Hyampom	
Legal Descrip.	T3N,R6E,S2&3	
Elevation	1300-2000	
Cliff Height	100-250' (30-75m)	
Cliff Aspect	SW	
Final Classification	Possible	

PREY NOTED: Killdeer, Belted Kingfisher, Black-headed Grosbeak, Robin, Common Flicker, Dark-eyed Junco, Stellars Jay, Merganser, Sandpiper sp.

RAPTORS NOTED: None.

FEEDING HABITAT AVAILABILITY AND QUALITY: In the immediate area is a hardwood chaparral mix with some digger pines. Conifers increase with elevation upslope.

SITE RELATION TO WATER: The South Fork of the Trinity River flows beneath the cliffs from south to north. Eltapom Creek flows along the south side of the cliffs from east to west.

DISTURBANCE POTENTIALS: The cliffs are right on the Trinity River very near a public campground. Recreational use of the river near the cliffs may be a disturbance factor.

FACTORS FOR PEREGRINE ESTABLISHMENT: High vertical cliffs of dark, probably volcanic rock, southwest aspect. Ledge availability is good (see drawing). Good prey availability. Overlooks a major river.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Possible disturbance by persons on foot. The cliff does not receive sun until 10:30-11:00 a.m.

MANAGEMENT RECOMMENDATIONS: Observe every spring for occupation. If establishment occurs a guard could be posted to prevent likely disturbance. Due to much human activity in the vicinity however (as at Murderer's Bar - #53B), care must be taken to avoid attracting public attention. An alternative would be a frequent patrol of the site to access disturbance and when possible prevent it, also posting of the immediate vicinity of the rocks to forbid public hiking there. Avoid logging, and roadwork beneath the rock, from mid-Feb. to late June.

DIRECTIONS TO THE SITE: From Hyampom follow F.S. road north toward Hyampom Station. The cliffs are obvious from the road just before Big Slide Campground.

GROUND RESULTS

SITE NAME Burnt Ranch

SITE NUMBER 98A

		Dates Visited
Forest Name	Trinity	
Aerial Photo #	23-16-33	5/21/79
Aerial Photo Rating	B	
Quadrangle	Ironside Mountain	
Legal Descrip.	T5N,R6E,S11&12	
Elevation	2-3000	
Cliff Height	150' nest cliff (44m)	
Cliff Aspect	nst clf slightly S of W	
Final Classification	Historical/Active	

PREY NOTED: Mourning Dove, Flycatcher sp., Blck-headed Grosbeak, Lark Bunting, Domestic Pigeon, Spotted Sandpiper, Rufous-sided Towhee, Brwn or Green-tailed Towhee, Common Flicker, Stellars Jay, Band-tailed Pigeons observed in March-April. Flocks of racing pigeons observed flying up and down canyon.

RAPTORS NOTED: adult female Peregrine Falcon.

FEEDING HABITAT AVAILABILITY AND QUALITY: Feeding habitat appears adequate. Major river canyons. Two or more habitat types - oak, chaparral, conifer - within 2 miles. Elevations to chose foraging habitat diverse. Avian species appear subjectively much less diverse and rich than other active sites observed. Racing pigeons may be an important foraging parameter of this territory.

SITE RELATION TO WATER: The nesting cliff (1977,1978,1979) is within ¼ mile of the Trinity River. Altitude above water is approximately 500 feet. Site is app. 2 miles south of confluence of the New River and the Trinity.

DISTURBANCE POTENTIALS: Low with exception as follows. Present eyrie and nesting cliff are accessible to humans if they wanted to disturb the falcons. Eyrie is approx. 15-25' from top of cliff where a determined, agile person could get to and possibly re-climb to top. The steep river canyon is the major obstacle which lowers disturbance potential of this site from high to low. Site is located on a major highway (299) and is visible from road.

FACTORS FOR PEREGRINE ESTABLISHMENT: Re-occupation site (circa 1974-75) although the possibility exists that the pair was here but not noted before this period. Rumoured to have been active in 1960's and early 1970's; if so this indicates high suitability of territory. Fledged young observed in past years. Massive cliffs of the territory (including Gray Falls area, #47) are highly conspicuous and make area attractive to passing falcons. Young present this year. Excellent riverine site. Fresh whitewash present.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Possibility of reproductive problems at this territory. No more than 2 young have been observed in recent years. Only 1 young in 1979. Other ledges on cliffs in this territory are present but overall feeling is that most are lacking overhang and that all are relatively exposed, including present eyrie.

MANAGEMENT RECOMMENDATIONS: Leave as a non-guarded site. Continue yearly observation, especially early-late May when young's visibility makes eyrie location and success data easier to obtain. Territory is difficult to observe due to size, eyrie and adults difficult to locate. Experienced

observers are recommended. 1978 eyrie (D.Harlow for location) and 1979 eyrie should be climbed; possibility of addled eggs in scrape. Greater area (including Gray Falls and cliff ½-1 mile east of B.R.) could hold potential for two resident pair.

DIRECTIONS TO THE SITE: Site is approximately 10 miles east of Weaverville on 299. Nest cliff (1978-79) is located on east side of gully across from Hennessey Road area on lower of two faces. Eyrie is long down-sloping grassy ledge with small bush. One pine about 200 feet east of eyrie has been a common perch in prior years.

ENHANCEMENT POTENTIAL: Ledges noted appear to lack overhang and are relatively exposed. Present eyrie appears exposed. It is believed nesting ledges could be enhanced, however because of present active status this is not a priority site for enhancement.

CONCLUDING COMMENTS: Site is active for peregrines in 1979. Adult female confirmed at nest cliff during ground check, tiercel was not observed. One young confirmed in eyrie, a female, 18-23 days old. See directions for eyrie location.

GROUND RESULTS

SITE NAME Sailor Bar Creek

SITE NUMBER 103

		Dates Visited
Forest Name	Trinity	
Aerial Photo #	33-13-106	6/4/79
Aerial Photo Rating	B	
Quadrangle	Hayfork	
Legal Descrip.	T33N,R12W,S12	
Elevation	3000	
Cliff Height	80-200' (23-59m)	
Cliff Aspect	S-SW	
Final Classification	Possible	

PREY NOTED: Robins and Black-headed Grosbeaks most numerous. Stellars Jay, Band-tailed Pigeon, Quail sp., Common Flicker, Lewis and other woodpeckers, and other small songbirds.

RAPTORS NOTED: Common Raven, Kestral.

FEEDING HABITAT AVAILABILITY AND QUALITY: The habitat is mixed hardwood and coniferous forest. The southern slopes tend to be thinner forest of hardwood shrubs. Clear-cuts in the area provide brush and small conifers and edge. Subjectively, prey availability is good. Trinity River canyon is easily accessible for hunting.

SITE RELATION TO WATER: Sailor Bar Creek is a small creek that flows along the southwest side of the cliffs from s.e. to n.w. It enters the Trinity River down-canyon approx. 1.5 miles.

DISTURBANCE POTENTIALS: The site is located in a heavy logging area. Logging close to the cliff or within earshot during the spring may be a disturbance factor. A road passes within 1 mile within view of the rock but it is a deadend spur road and shouldn't be freqently traveled, except during logging activities.

FACTORS FOR PEREGRINE ESTABLISHMENT: South to southwest facing cliffs near a major river. Good ledge availability (see drawing). Good prey availability. The rock overlooks Sailor Bar Creek with 300 feet effective height, about halfway up ridge; has vertical faces up to 150-200 feet.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Lacks the high, dominant character of most known peregrine sites. Possible logging disturbance. No visible evidence of raptor activity.

MANAGEMENT RECOMMENDATIONS: Check the site yearly for occupation. Avoid logging near the cliff during the early spring until observations for activity can be made. If occupation occurs halt logging and discontinue road-building within 1 mile radius of the site year round, close road #33N45B to public access from mid-Feb. to late July, maintain low disturbance.

DIRECTIONS TO THE SITE: Rt. 299 to Big Bar. Turn south on F.S. road 16 to 33N45 to 33N45B. Cliffs are visible from the road.

ENHANCEMENT POTENTIAL: Enhancement is not recommended as ledge availability is adequate.

GROUND RESULTS

SITE NAME Big Bar/Weaverville A (Tunnel Ridge)

SITE NUMBER 208

		Dates Visited
Forest Name	Trinity	
Aerial Photo #	20-12	7/14-15/79
Aerial Photo Rating	B	7/16/79
Quadrangle	Helena	
Legal Descrip.	T34N,R10W,S30	
Elevation	3500	
Cliff Height	total 200' (59m), faces up to 75-100' (22-30m)	
Cliff Aspect	WSW	
Final Classification	Possible	

PREY NOTED: Stellars Jay, Dark-eyed Junco, Robin, Mountain Quail, Lazuli Bunting, Great Blue Heron.

RAPTORS NOTED: Kestral.

FEEDING HABITAT AVAILABILITY AND QUALITY: The slopes below the cliffs are a mixture of brush, oak, meadows, and open rocky areas. The ridge across the creek is almost entirely covered by forest. Including the riparian habitat along the creek, there is a good variety of habitats visible from the cliffs.

SITE RELATION TO WATER: The cliffs are located about 1 mile from Canyon Creek about 1500 feet above it up a steep slope. The Trinity River is 2-3 miles to the s.w.

DISTURBANCE POTENTIALS: There is a paved road that follows Canyon Creek, traffic flow is light; also several occupied residences along the road. Some of Canyon Creek is claimed for placer mining. One active claim, located directly below the cliff areas, has a gasoline powered dredge in use. However, considering the cliff's distance from the creek, and the ruggedness of the hillside, they should be free from human disturbance.

FACTORS FOR PEREGRINE ESTABLISHMENT: WSW aspect. Diverse feeding habitat. Good vertical protection. There are some faces 75-100 feet in height which, with effective height, may be suitable. Broken, fractured nature of the rock

suggests ledges and cavities though none were positively noted. There is much area of exposed rock along about a mile of the top of the ridge.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: The cliffs have a broken look to them with little apparent sheer faces of acceptable size. The site appears more suitable for prairie falcons.

MANAGEMENT RECOMMENDATIONS: Observe the site periodically for evidence of falcon activity. If occupation occurs restrict logging in the canyon from mid-February to late June. Restrict mining activities which could pose disturbance to nesting birds, such as blasting, for same duration. Great vertical height above the canyon should provide enough protection to make further restrictions unnecessary.

DIRECTIONS TO THE SITE: From Arcata, take Hwy 299 east to Junction City. Take a left on Canyon Creek Rd. and proceed 3-4 miles north. The cliffs are visible on the east side of the road at the top of the ridge.

ENHANCEMENT POTENTIAL: Broken up nature of the rock and few faces of substantial vertical height make this a low priority site for enhancement.

GROUND RESULTS

SITE NAME E.F. Trinity River/Wildcat Peak

SITE NUMBER 104

		Dates Visited
Forest Name	Shasta	
Aerial Photo #	53-7-181	6/17/79
Aerial Photo Rating	B	
Quadrangle	Bonanza King	
Legal Descrip.	T37N,R6W,S20	
Elevation	5500	
Cliff Height	200' (59m)	
Cliff Aspect	W	
Final Classification	Possible	

PREY NOTED: Robin, Hairy Woodpecker, Stellars Jay, Black-headed Grosbeak, Western Tanager. Subjectively, prey did not appear abundant.

RAPTORS NOTED: Common Raven, Unidentified Buteo.

FEEDING HABITAT AVAILABILITY AND QUALITY: Good habitat diversity. Riverine habitat to south and west with open space and gravel bars. Big meadow 1 mile south. E.F. Trinity east slopes to south primarily timbered. East side of Bonanza King Mtn. across from Wildcat has much rock and brush, west, south, s.e. and s.w. sides of Wildcat Peak are mixture of conifer forest and deciduous trees and brush; more brush toward top.

SITE RELATION TO WATER: East Fork of the Trinity River 1 mile due west. Claire-Engle Lake 3.5 miles s.w. Devil's Lake and Grouse Lake 1.5-2 miles n.e.

DISTURBANCE POTENTIALS: There is much private ownership in the vicinity of this site; Whipple Ranch 1 mile s.w., 8-10 dwellings to the south. However the rock is well protected by vertical height. Many roads in the vicinity, some with machinery and signs of timber cutting though no clear-cuts are apparent. A local resident informs that some 28 miles of road have been built recently in the area indicating increased activity in the future. Future logging could be a disturbance factor.

FACTORS FOR PEREGRINE ESTABLISHMENT: Rock knob on top of Wildcat with sheered

off west side creates 150' west-facing vertical cliff. Excellent relation to water; site overlooks a major river and reservoir. Mountaintop location gives good vertical height, conspicuous appearance. Cliff has overhang. Rock is sufficiently cracked and fractured to harbor possible ledges.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Possible increasing human disturbance. There is a south facing sheer face running diagonally across the primary cliff which separates it into 2 sections, reducing the vertical expanse. Much mineral wash but no apparent whitewash. No apparent ledges. High elevation.

MANAGEMENT RECOMMENDATIONS: Observe periodically for sign of raptor activity. If occupation occurs restrict logging of sections in F.S. ownership, especially Wildcat Peak section. The site could be considered for enhancement.

DIRECTIONS TO THE SITE: From Weaverville north on Hwy 3. 5 miles past Trinity Center turn right on Rt. 106 (French Gulch Road) and follow to just past E.F. Trinity River crossing, turn left 1.4 miles to right turn. After right go .7 miles to turnoff on left and follow 100 yards to locked gate and view of rock. Walk up road $\frac{1}{2}$ mile for closer view. Or take second turnoff on left, drive to end, and hike to west side of Wildcat. Site may be viewed via Celestron or Questar on F.S. 106, 5.5 miles past bridge at Rt. 3 intersection.

ENHANCEMENT POTENTIAL: There is a large vertical crack on the lefthand side of the rock which may well accommodate an artificial structure (see photo), another smaller one on the top righthand side.

GROUND RESULTS

SITE NAME Castle Crags

SITE NUMBER 110

		Dates Visited
Forest Name	Shasta	
Aerial Photo #	62-33-182, 61-33-174	5/18/79
Aerial Photo Rating	A	6/5/79
Quadrangle	Dunsmuir	
Legal Descrip.	T38N,R4W,S5,8,4,9 & T39N,R4W,S32	
Elevation	44-6000	
Cliff Height	5-600' (148-176m)	
Cliff Aspect	S	
Final Classification	Historical/Active	

PREY NOTED: Black-headed Grosbeak, Mourning Dove, Common Flicker, American Robin, Western Wood Peewee, Stellars Jay, Flycatcher sp.

RAPTORS NOTED: Sharp-shin Hawk, Turkey Vulture, Peregrine Falcon.

FEEDING HABITAT AVAILABILITY AND QUALITY: The Sacramento River and Castle Creek provide large canyon expanses. Ridgetops present. Habitat diverse due to elevation, edaphic factors, and loggging. Excellent, but subjectively not as diverse or abundant as sites nearer the coast.

SITE RELATION TO WATER: Sulpher Creek originates near cliffs observed. Castle Creek, Indian Creek are within one mile. The Sacramento River is within 4

miles.

DISTURBANCE POTENTIALS: Moderate from rock-climbers (rock climbing is how Wenzel discovered site in 1972 or 1973). Climbing activity is frequent from March to May.

FACTORS FOR PEREGRINE ESTABLISHMENT: Peregrines sighted in 1979 (see Concluding Comments). One of the remnant population sites, with occupancy and success since at least 1973. A prime peregrine cliff, extremely dominant on the landscape. South aspect, very high cliffs.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: None, excepting possibly the large distance to the next known peregrine site, which could hinder re-occupancy after a pair is lost.

MANAGEMENT RECOMMENDATIONS: Yearly observation to ascertain occupancy and success. This is not a beginner's site for observation unless cliffs are closely approached. Leave as non-guarded site. However, Castle Crags would be a suitable candidate for a foraging, etc. study because they represent different habitat types than most active sites known. Where these birds feed, on what, their reproductive timing, perch locations on cliffs, etc. would be valuable data.

DIRECTIONS TO THE SITE: Go west from Castella on road through Castle Crags State Park. Walk up jeep trail at Sulpher Creek; continue upslope when jeep trail ends and Pacific Crest trail is encountered. Observation point is a decomposed granite barren ridge. Known nesting cliff, as well as one to the west and one to the east, can be viewed from here.

ENHANCEMENT POTENTIAL: Extremely high cliffs make enhancement unfeasible, and high suitability of the rock makes it probably unnecessary.

CONCLUDING COMMENTS: An adult peregrine was observed during ground check (6/5) perched in a pine tree on the cliff to the west of known nesting cliff. However, nesting status was not confirmed. The known eyrie which is 1/3 - ½ down from the top of the cliff was viewed; whitewash was present but not much. D. Harlow (USFWS) reported an active pair at the old cliff in April or May. E. Wenzel observed an adult during fixed-wing inspection April 4 or 5. General impression is that the pair has changed nest location or failed this year.

GROUND RESULTS

SITE NAME McCloud Bridge

SITE NUMBER 114

		Dates Visited
Forest Name	Shasta	
Aerial Photo #	65-4-93	5/25/79
Aerial Photo Rating	B	
Quadrangle	Bollibokka	
Legal Descrip.	T36N,R3W,S31 & 32	
Elevation	1500-2000	
Cliff Height	vertical faces up to 100' (30m)	
Cliff Aspect	S,W,NW	
Final Classification	Possible	

PREY NOTED: Jays, low in number. More Scrub Jay habitat near cliff, probably Stellars habitat north side. Other species in area include Robins, Black-

headed Grosbeaks, Northern Oriole, Western Tanager, Cliff Swallow, Acorn Woodpecker, Flicker, Western Wood Peewee, Starling, Cowbird, and Warblers.

RAPTORS NOTED: Suspect Cooper's Hawk nest territory in the area - heard possible nest calls from woods below rocks and saw hunting female over trees below cliff.

FEEDING HABITAT AVAILABILITY AND QUALITY: Habitat is primarily black oak/ponderosa pine and live oak/digger pine. Little to no riparian vegetation within 2 miles. In general forage habitat appears less diverse than at sites such as Pit 4 and Burnt Ranch (sites #98A and 123).

SITE RELATION TO WATER: Site is approx. ½ mile east, 750-1000 feet above McCloud Arm of Shasta Lake. In winter this area is a flowing river, in spring and summer is lake.

DISTURBANCE POTENTIALS: Road at base of site is lightly used winter and spring except some logging traffic. Considerable recreation use May to September. No commercial timber on site. Site is on National Recreation area, so major development is unlikely -- area is too far upriver for marina. Possibly attractive for rock-climbing. Small campground along lake shore below site. If lake is raised 200' in future, road access might bring marina.

FACTORS FOR PEREGRINE ESTABLISHMENT: Fair aspect, fair forage, moderate disturbance.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Natural holes and ledges appear poor. Most overhangs have no ledge formation below. Much of rock is jumbled and probably accessible to bobcats, ringtails, snakes, etc. Digger pines grow up in front of several faces, providing access for owls. Of 9 or 10 "faces", about 2/3 face west or n.w. and get no sun until afternoon. Largest south-facing cliffs have no visible holes. Very limited riparian vegetation results in only fair foraging habitat.

MANAGEMENT RECOMMENDATIONS: As stands, no problems foreseen.

DIRECTIONS TO THE SITE: Interstate 5 north from Redding to Salt Cr./Gilman Rd. exit. N.E. on Gilman Rd. to McCloud Bridge. About 3/4 to 1 hour from Redding. Site is easily visible from Gilman Rd just before crossing McCloud Bridge. Site is on east side of McCloud Bridge.

ENHANCEMENT POTENTIAL: Horizontal seams in rock might be enhanced.

GROUND RESULTS

SITE NAME North Gray Rocks

SITE NUMBER 115

		Dates Visited
Forest Name	Shasta	
Aerial Photo #	64-4-102; 64-4-124	5/19/79
Aerial Photo Rating	A	
Quadrangle	Lamoine/Bollibokka	
Legal Descrip.	T34N,R4W,S12,13,16	
Elevation	2-3000	
Cliff Height	100-500' (30-148m)	
Cliff Aspect	primarily W	
Final Classification	Historical/Highly Suspected	

PREY NOTED: Violet-green Swallow, Black-headed Grosbeak, Common Flicker, Scrub Jay.

RAPTORS NOTED: Turkey Vulture (abundant), pairs of Red-tail Hawks spotted 3-4 times, Golden Eagle observed in Shasta Caverns vicinity for 10 minutes.

FEEDING HABITAT AVAILABILITY AND QUALITY: Subjectively, both quality and quantity of feeding habitat are adequate. The avifauna does not appear either extremely diverse or abundant however.

SITE RELATION TO WATER: Shasta Lake is located immediately below the site within ¼-3/4 mile (variable). Approximately 500 feet vertical above lake.

DISTURBANCE POTENTIALS: Moderate. Greatest potential for disturbance is rock in vicinity of Shasta Caverns. A whitewashed ledge was noted both from helicoptor and on ground on cliff above the caverns, which also appears to have the best vertical expanse. Rock is extremely large in area, covering about 2 miles along ridgetop, with good vertical protection; human activity on lake should not disturb nesting falcons.

FACTORS FOR PEREGRINE ESTABLISHMENT: This is a historical (Bond) site. Territorial occupancey by peregrines noted as early as 1975 and as late as 1978 (Wenzel). Magnet cliff. Limestone rock provides adequate eyrie substrate. Exposure largely west but some south and north. Very large amount of rock. Unidentified falcon observed in the vicinity 3/26/79 (see Concluding Comments).

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Possible human disturbance from activities at Shasta Caverns. Presence of golden eagles in vicinity lowers possibility of peregrine re-establishment as these two species are highly intra-specifically aggressive. Habitat is felt to be marginal for peregrines - a zeric transition zone between present day peregrine and prairie habitat (overlap area).

MANAGEMENT RECOMMENDATIONS: Yearly observation via boat to determine territorial occupancy. At least two observers are recommended for this. Leave as non-guarded site unless determined necessary in future years. Manage human activity as much as possible around Shasta Caverns if cliff becomes re-occupied. No climbing on rocks in this case. This cliff might have adequate vertical protection to prevent failure, despite human traffic.

DIRECTIONS TO THE SITE: From Interstate 5 take Shasta Caverns exit to Holiday Harbor. Rent a boat (or use F.S. vessel) and cross Shasta Lake due east. Observe rock from lake or dock and hike up ridge at convenient points for closer look. Easy accessibility to part of the area is available on Shasta Caverns Rd.

ENHANCEMENT POTENTIAL: Extremely high rock masses and rugged nature of the site would make enhancement very difficult. Ledge availability is probably adequate.

CONCLUDING COMMENTS: An unidentified falcon was observed 3/26/79 from Interstate 5, flying northeast just east of the highway across from North Gray Rocks.

GROUND RESULTS

SITE NAME Devil's Rock

SITE NUMBER 117

		Dates Visited
Forest Name	Shasta	
Aerial Photo #	70-5-140	6/1/79
Aerial Photo Rating	B	
Quadrangle	Bollibokka	
Legal Descrip.	T35N,R2W,S32,33	
Elevation	3200	
Cliff Height	best cliff: 100' (30m)	
Cliff Aspect	W-NW (possible S)	
Final Classification	Highly Suspected	

PREY NOTED: 3 Band-tailed Pigeons, Stellars Jay, Scrub Jay, Robin, Black-headed Grosbeak, Western Tanager, Acorn Woodpecker, Common Flicker, Western Wood Peewee, Cliff Swallow, Violet-green Swallow, Warblers.

RAPTORS NOTED: adult Peregrine Falcon, 2 unidentified Hawks (either Peregrines or Cooper's). An adult Goshawk was observed soaring over the Bars Creek area and crossing the ridge into Dinner Gulch near the base of the formation. Presence of an adult at this season could indicate a nest territory in area - with good old growth and spring-fed creeks, good habitat is present.

FEEDING HABITAT AVAILABILITY AND QUALITY: Habitat is primarily black oak/ponderosa pine, with douglas fir/live oak on some slopes and digger pine/live oak/buckeye around base of formation. Down in Squaw Creek canyon, some riparian habitat with alders, oaks, some big leaf maple. Also some madrone in area. Good habitat in Squaw Creek drainage. Also, there is good riparian habitat in Flat Creek drainage 1½ mile east of site.

SITE RELATION TO WATER: Site is 1 - 1.5 miles east of Squaw Creek, a perennial stream; it flows into Squaw Creek Arm of Shasta Lake about 1½ miles s.e. of site. Several perennial and intermittent tributaries of Squaw Creek (Low Pass Ck., Bars Ck., and Dinner Gulch) drain from the site area. Flat Creek, a perennial tributary to Pit Arm of Shasta Lake, is 1.5 miles east of site.

DISTURBANCE POTENTIALS: Low. Site is accessible only by hiking through rough terrain and vegetation from poor roads and trails. Commercial timber may be present in Dinner Gulch/Bar Creek area, but no harvest plans are known at this time. Timber operations would be limited by steep slopes and by possible presence of sensitive species. (See Recommendations). Area is not part of National Recreation Area.

FACTORS FOR PEREGRINE ESTABLISHMENT: Good forage base. Low disturbance potential. Wide variety of rock in area. Potholes were visible from vantage point (west and north side of big rock at the head of the ridge which divides Bars Creek and Dinner Gulch), and should occur elsewhere. Best nesting habitat visible from this location appeared to be on cliff which stands free of the major formation - west facing cliff on the Bar Creek drainage just west of line between Sec. 33 and 32; cliff is about 100' high with a depression across its center and at least two potholes in the depression, size about 4' in width. It was near this point where the two unidentified raptors were seen; no whitewash was visible here but there is possible whitewash on a good-looking perch nearby.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Most of the faces have west to n.w.

aspect (south side of the major formation was not closely looked at). Much of the rock in the area is jumbled, although there are definitely some inaccessible, suitable faces.

MANAGEMENT RECOMMENDATIONS: Observe the site yearly for peregrine activity - high priority. It is believed this area was included in RARE II but USFS recommendation is not known. The entire Brock Butte - Gray Rocks area between the Squaw Arm and Pit Arm is known as the Hasselkus formation and features rare plants, Shasta salamanders, golden eagles, and now peregrine and goshawk records. It has been mentioned as a Research Natural area, and it is felt this designation would be entirely fitting.

DIRECTIONS TO THE SITE: Interstate 5 north from Redding. Off at Salt Creek/Gilman Rd. exit. Northeast on Gilman Rd., across McCloud Arm at McCloud Bridge, and continue on rough gravel/dirt road to Squaw Creek. Cross Squaw Creek bridge and turn right. Go past Chirp-chatter campground (a good place to spend the night). South down rough rock pick-up road to Dinner Gulch - known by small waterfall on east side of road. Hike up ridge north side of Dinner Gulch. About 2 - 2.5 hour drive from Redding, with $\frac{1}{2}$ - 1 mile hike up ridge.

ENHANCEMENT POTENTIAL: Potholes were noted during ground check on a suitable face with overhang (see Factors For Peregrine Establishment). Ledge enhancement should be unnecessary.

CONCLUDING COMMENTS: A single adult peregrine falcon was observed during ground check soaring over the rock in Section 32, E$\frac{1}{2}$ west end of formation. Two unidentified raptors, either peregrines or Cooper's hawks, were also briefly observed soaring and stooping at each other near the cliff right along line between Sections 32 and 33, north side of formation. Possible whitewash was noted on a good-looking perch (see Factors For).

GROUND RESULTS

SITE NAME Deep Creek/Bales Mtn.

SITE NUMBER 124

		Dates Visited
Forest Name	Shasta	
Aerial Photo #	79-27-8	6/28-29/79
Aerial Photo Rating	A	7/1-2/79
Quadrangle	Montgomery Creek	
Legal Descrip.	T36N,R1E,Sec 26&27	
Elevation	3500-4500	
Cliff Height	200-400' (59-400m)	
Cliff Aspect	NE	
Final Classification	Possible	

PREY NOTED: Dark-eyed Junco, White-faced Woodpecker, Stellars Jay. Bird activity was surprisingly scarce during ground check.

RAPTORS NOTED: Golden eagle juvenile in eyrie.

FEEDING HABITAT AVAILABILITY AND QUALITY: Meadows and brush areas along some of the higher ridges in the area. The rest of the area is mixed pine/cedar forest.

SITE RELATION TO WATER: Deep Creek flows north along the foot of the ridge below the site, not more than $\frac{1}{4}$ mile from the cliffs, and enters the Pit River 1-2 miles north. Tributaries of Roaring Creek drain the west

side of the mountain.

DISTURBANCE POTENTIALS: The main potential disturbance in the area is logging. Chainsaws were heard from the site during ground check and there is plentiful timber in the area.

FACTORS FOR PEREGRINE ESTABLISHMENT: Large, dominant rock mass. The area of exposed rock is at least ½ mile in length and 1000' in height, with vertical faces 200-400'. Ledges and potholes are numerous.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Resident golden eagles. Northeast aspect.

MANAGEMENT RECOMMENDATIONS: Observe each year for occupation. Restrict timber cutting in the vicinity of the site from mid-February to the end of July. If occupation occurs close the access road to public entry and avoid all negative impacts to the area for same duration.

DIRECTIONS TO THE SITE: Take Hwy 299 east from Redding to the summit of Hatchet Mtn. Pass. At the summit take a left onto the road to the tree farm. At a fork in the road approx. 3 miles in take a right and follow it all the way to the end. The cliffs are plainly visible to the west.

ENHANCEMENT POTENTIAL: Enhancement not recommended; ledge availability appears adequate.

CONCLUDING COMMENTS: The site is active for golden eagles in 1979. One golden eagle juvenile was observed in an eyrie during ground check 7/1-2. The eyrie is a stick nest on a ledge, approx. mid-cliff height, left of center on the rock mass, just to the right of a large crack.

GROUND RESULTS

SITE NAME Sugarloaf Birch/Charlie Creek

SITE NUMBER 200/201

		Dates Visited
Forest Name	Shasta	
Aerial Photo #	57-07-48/58-07-14	6/18/79
Aerial Photo Rating	B	
Quadrangle	Lamoine	
Legal Descrip.	T35N,R5W,S16 & 17	
Elevation	2500	
Cliff Height	50-150' (15-44m)	
Cliff Aspect	S,W,E	
Final Classification	Unsuitable and Potential	

PREY NOTED: Common Flicker, California Quail, Black-throated Gray Warbler, Stellars Jay, Western Tanager, Black-headed Grosbeak, Common Bushtit.

RAPTORS NOTED: Red-tailed Hawk; an unidentified raptor was observed momentarily streaking across the road with folded wings, could have been a prairie falcon.

FEEDING HABITAT AVAILABILITY AND QUALITY: Site is in a transition zone towards xeric conditions but has diversity and may be adequate. South-facing slope above Sugarloaf Ck. is dry , much bare soil mixed with brush. North-facing side and beyond are 100% vegetated 60% brush and deciduous, 40% stands of timber. Slopes west of sites predominantly timber. Slope north of Dog Creek is even timber/brush mix. Slope north of Sugarloaf Lookout ridge is even bare soil/brush mix. Slope north of Charlie Ck. is predominantly brush and deciduous and small scattered conifers, with stands of

timber in upper reaches of drainage.

SITE RELATION TO WATER: Sugarloaf Creek drainage begins at base of #200 rocks; Charlie Creek 1.5 miles due east on other side of ridge immediately below #201 site. Both creeks drain into Shasta Lake approx. 3 miles s.e. Various parts of Shasta Lake are visible from the sites. Dog Creek drainage begins 1 mile north.

DISTURBANCE POTENTIALS: Road building is occurring at this time on the east slope above Charlie Creek in preparation for a timber cut on the upper reaches of Charlie Creek valley. Machinery and construction workers were encountered during ground survey. This disturbance will occur within a mile of the Sugarloaf Creek site and within the immediate vicinity of the Charlie Creek site.

FACTORS FOR PEREGRINE ESTABLISHMENT: The rocks have fair effective height with overlooks and west, south, and east aspects (Charlie Ck east aspect, Sugarloaf south and west). Suitability is extremely low for peregrines but possible for prairies. The rock is of sedimentary composition with horizontal orientation of the strata, which is good for ledge possibilities.

FACTORS AGAINST PEREGRINE ESTABLISHMENT: Poor condition and suitability of rock. Sugarloaf: the largest cliff, about 150 ft., is extremely decayed and unconsolidated; other bands of solid rock have inadequate vertical height. Charlie Creek rock is more consolidated but very small (50')in height. The sites are on privately owned parcels and heavy disturbance is in process. There are no discernible ledges or whitewash.

MANAGEMENT RECOMMENDATIONS: Check the sites periodically for prairie falcon activity. Examine the extent of present logging in the vicinity after completion to assess encroachment and impact to the sites. Lack of suitability for peregrine nesting, location on private land, and disturbance in process make further effective management unfeasible or land exchange unwarranted.

DIRECTIONS TO THE SITE: Interstate 5 to Lakeshore/Antler Rd. exit 1.5 miles s. of Lakehead on Lake Shasta. Turn west, cross hwy. and turn left on Lakeshore Rd. Cross Shasta Lake arm within 1 mile and turn right on F.S. #35N06. Proceed 5.5 miles to view of Charlie Creek site looking across drainage at small rocks. Sugarloaf Birch: 8 miles from turnoff to T intersection and turn left. Follow 1 mile to end of road avoiding left hand turns, hike trail 1-1.5 miles to view of cliff looking east and northeast.

ENHANCEMENT POTENTIAL: Fairly simple enhancement for prairie falcons might be feasible by prying out loose sections of rock; strong horizontal orientation of strata may permit formation of small ledges in such a manner. Platform placement is probably unfeasible due to loose, unconsolidated nature of the rock.